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FEB 26 1969

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE--SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
FEB. 1, 1969

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80521
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

FEBRUARY 1, 1969

Issued by

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ADMINISTRATOR
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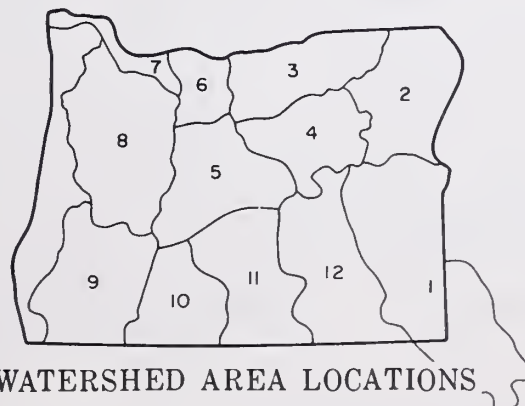
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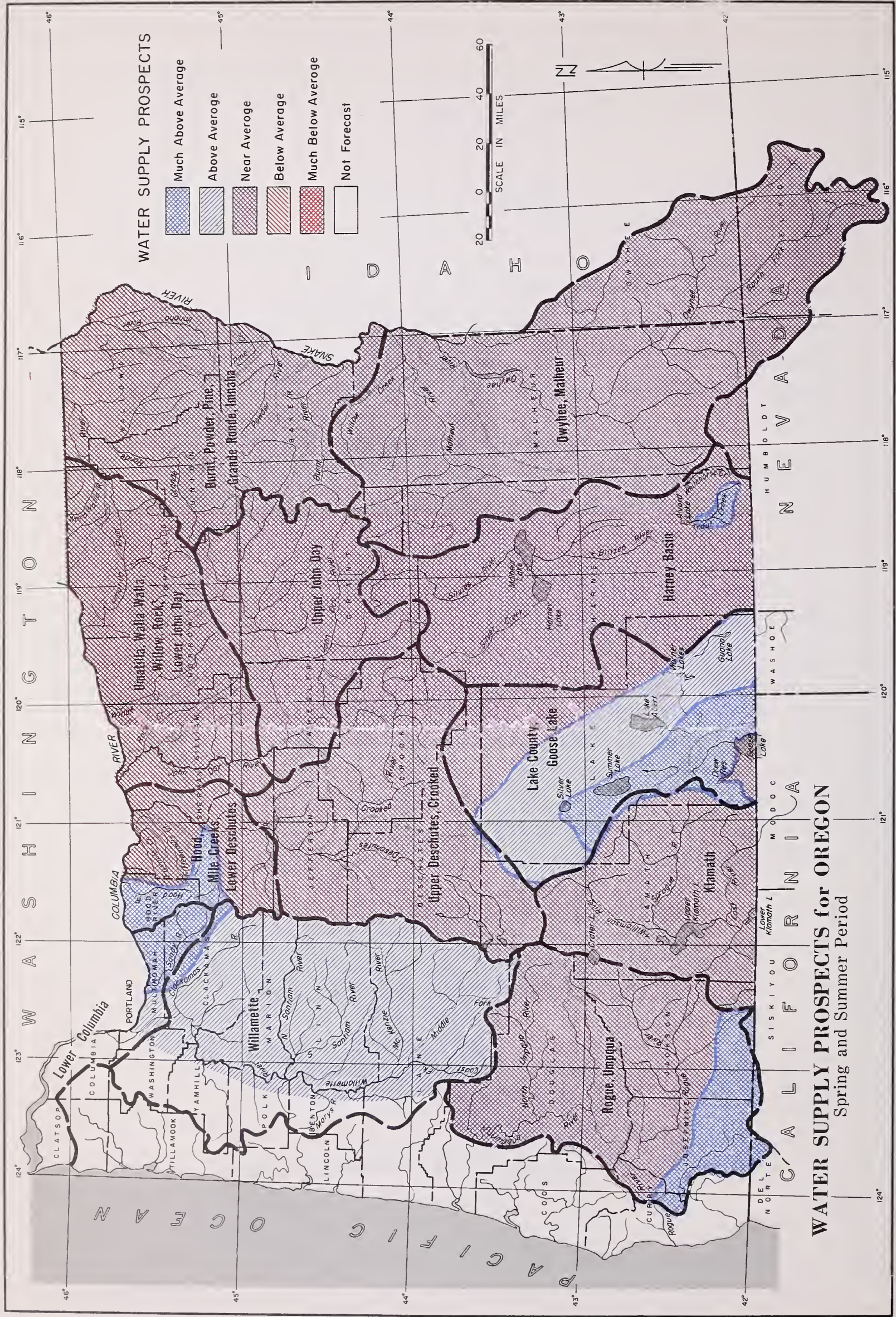
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WATER SUPPLY PROSPECTS

- Much Above Average
- Above Average
- Near Average
- Below Average
- Much Below Average
- Not Forecast

WATER SUPPLY PROSPECTS for OREGON
Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

February 1, 1969

Adequate to above average water supplies will be experienced by Oregon water users this spring and summer. January storms deposited generous amounts of snow on an already above average snowpack. Soil moisture is better than it has been for the past several years. Forecasted streamflow is average to above average in all areas of the state.

SNOW COVER

Snow cover ranges from 135 percent of average in the northeast corner of the state to over 200 percent of average in the Mt. Hood area. January storms brought large amounts of snow to Oregon mountains. New February first record amounts of snow water were measured at Phlox Point on Mount Hood near Timberline Lodge, Hogg Pass above Albany and at Siskiyou Summit near Ashland.

PRECIPITATION

Precipitation as reported by the U. S. Weather Bureau for the winter period November through January has been above average in all areas of Oregon. It ranged from a high of 180 percent on the Owyhee and Malheur watersheds to a low of 103 percent in the Hood River-Lower Deschutes area.

RESERVOIR STORAGE

As of February 1, twenty-two Oregon reservoirs were storing 1,462,000 acre feet compared to the 1953-67 average of 1,662,000 acre feet. This improvement from last month's 1,113,000 acre feet is due to above average January streamflow in the state.

SOIL MOISTURE

Soils are the wettest this year that they have been for the past two or three years. This should benefit the snowmelt runoff.

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STREAMFLOW

Streamflow in January was average to above average throughout the state. Inflow to Lake Owyhee was 350 percent of average for the high, while only average flows were experienced in the Klamath Basin.

Selected April-September forecasts are as follows:

<u>Stream</u>	<u>April-Sept. Forecast</u>	<u>Percent of 1953-67 Average</u>
Owyhee Reservoir net Inflow	500,000 a.f.	167
Grande Ronde near La Grande	200,000 a.f.	114
Deschutes at Benham Falls	552,000 a.f.	93
Hood near Hood River	450,000 a.f.	134
Mid. Fk. Willamette blw. N. Fk.	992,000 a.f.	120
Rogue at Raygold	990,000 a.f.	105
Klamath Lake - Net Inflow	775,000 a.f.	125

SUMMARY

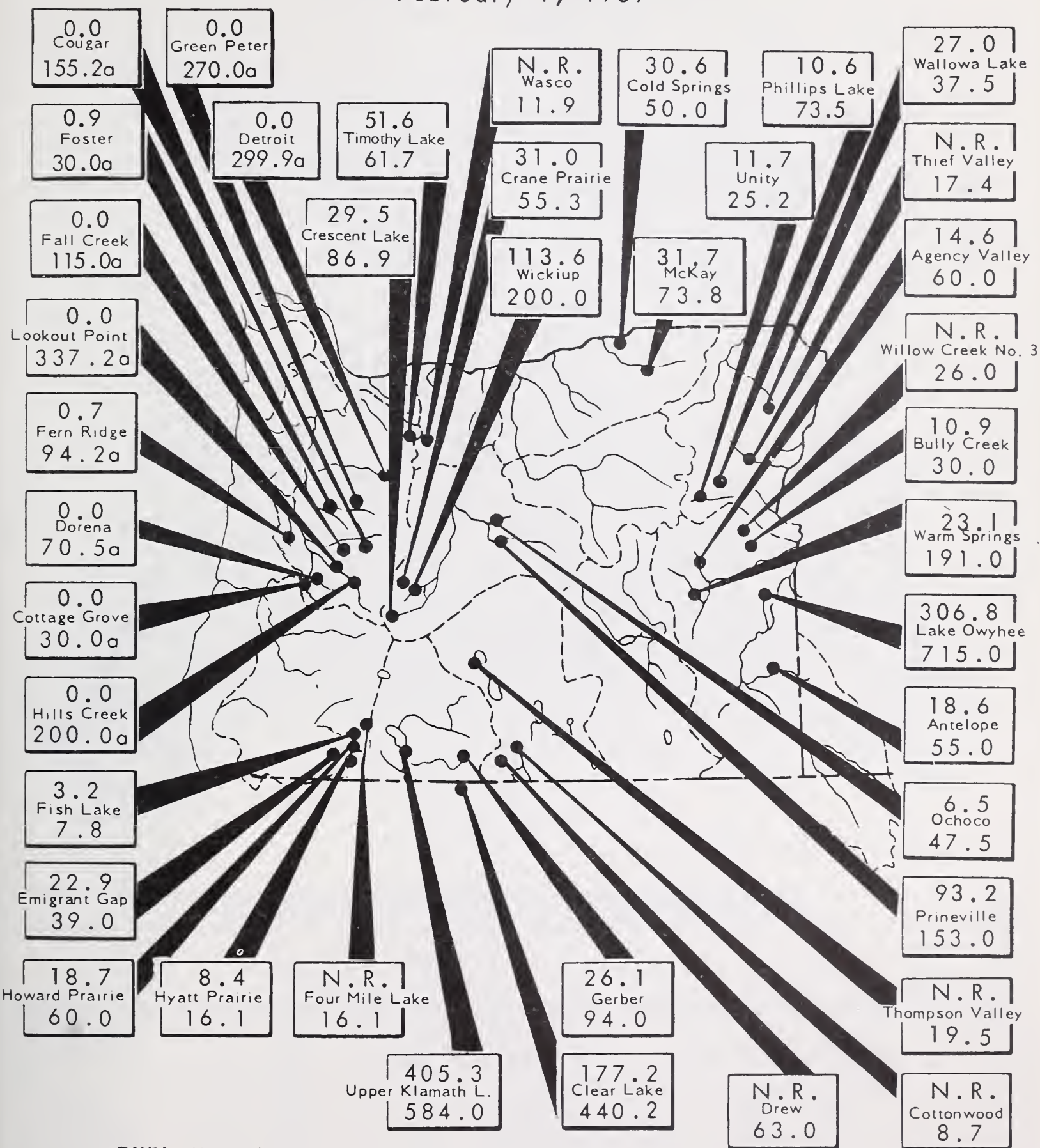
In summary, an excellent snowpack will produce above average streamflow this summer. This streamflow combined with existing reservoir storage will provide adequate supplies to Oregon water users in 1969.



STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

February 1, 1969



(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

February 1, 1969



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON^a

February 1, 1969



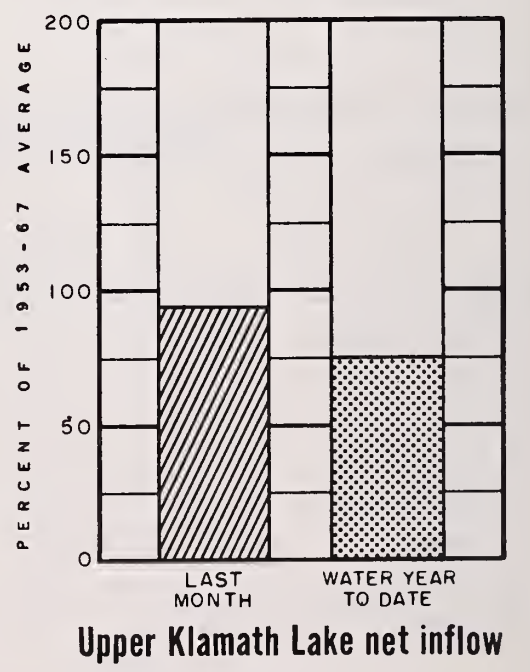
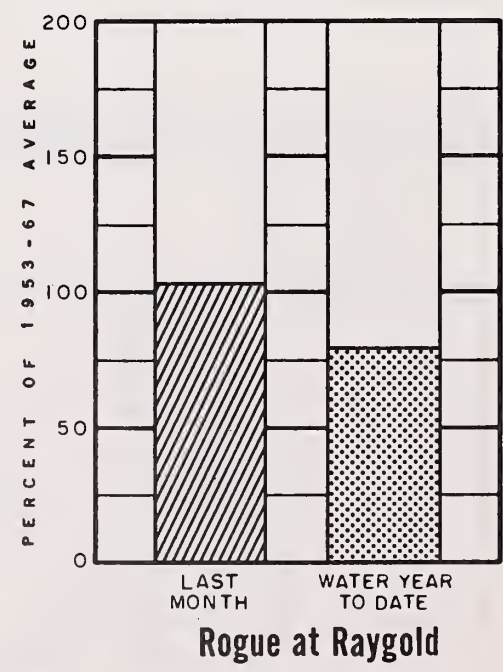
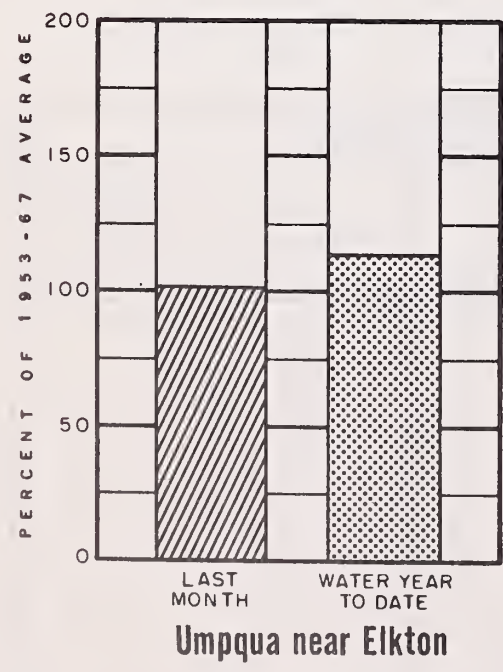
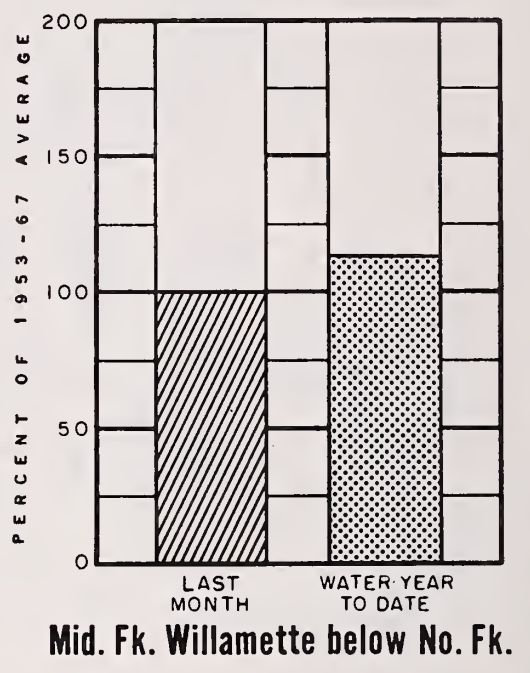
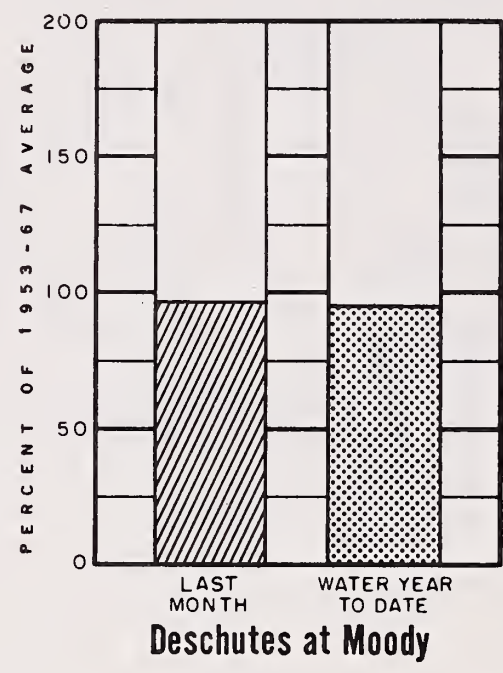
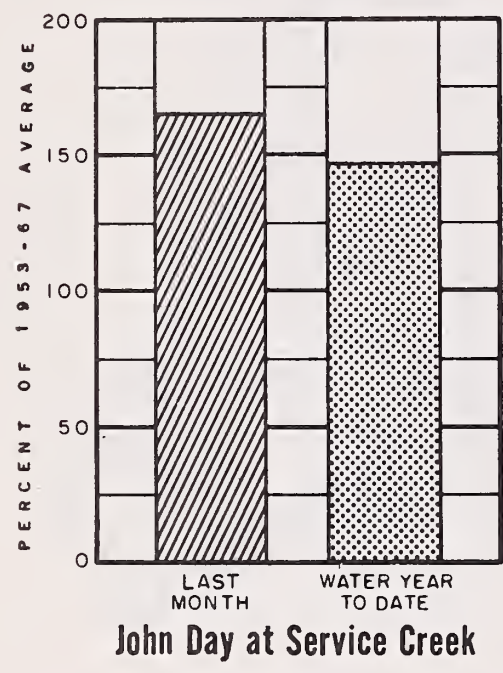
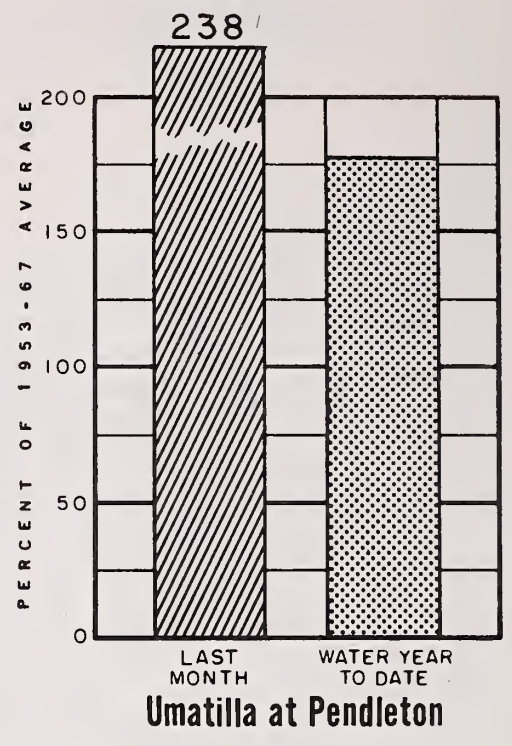
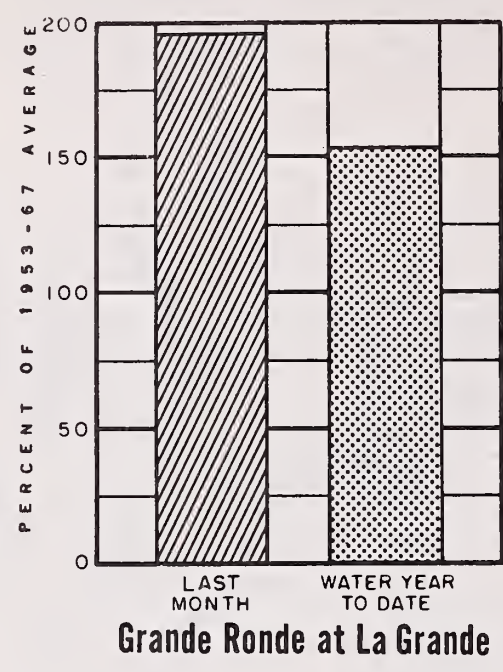
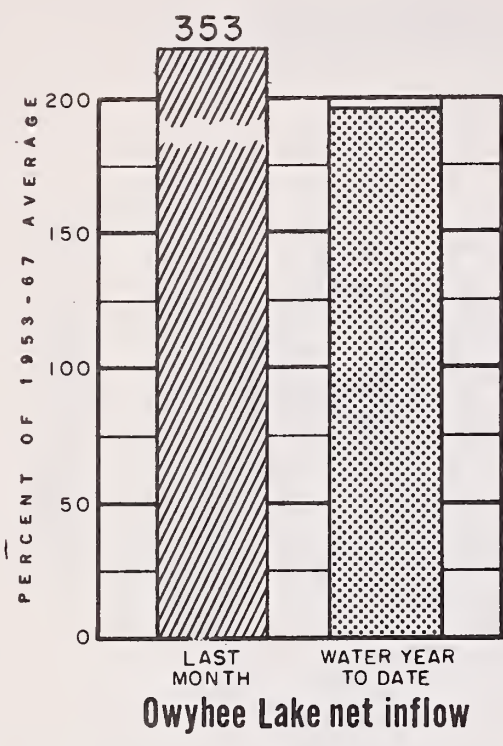
PRECIPITATION as PERCENT of the 1953-67 AVERAGE

STATION	LAST MONTH	WATER ^b YEAR TO DATE	STATION	LAST MONTH	WATER ^b YEAR TO DATE
Baker Apt.	111	141	Lakeview	243	140
Bend	138	82	Meacham	105	104
Burns	192	130	Medford Apt.	167	99
Enterprise	100	118	Nyssa	215	143
Eugene Apt.	155	152	Pendleton Apt.	166	133
Heppner	195	151	Portland Apt	118	147
John Day	76	143	Salem Apt.	104	141
Klamath Falls Apt.	175	100	The Dalles	114	131
			Owyhee (Nevada)	101	152

(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

February 1, 1969



Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers and ranchers in Malheur County will have adequate water supplies this summer. Storms in January brought more than generous amounts of snow to both the Owyhee and Malheur watersheds. Excellent streamflow this spring and summer will help make up for last year's low flows and will provide additional carryover storage for next year.

SNOW COVER

The snowpack is 162 percent of the 1953-67 average. A new record of 18.2 inches water content for February 1 was measured at South Mountain, Idaho. This compares with the previous high of 17.9" measured in 1952. Snow at Blue Mountain Springs on the Malheur is 145 percent of average.

PRECIPITATION

According to the U. S. Weather Bureau the November-January precipitation was 180 percent of average. Storms in January deposited excellent amounts of precipitation throughout Malheur County and was 200 percent of the new 1953-67 average.

SOIL MOISTURE

Soils are the wettest they have been for the past several years and will absorb less than usual amounts of snowmelt water from the runoff.

RESERVOIR STORAGE

Storage in Warm Springs, Agency Valley and Bully Creek has improved from last month. Current contents are 48,600 acre feet compared to last month's 33,200 acre feet and a February 1 average of 112,400 acre feet. January inflow also improved storage in Lake Owyhee. It held 306,800 acre feet on February 1 compared to last month's 167,000 acre feet and a February 1 average of 359,300 acre feet.

STREAMFLOW

January streamflow was considerably above average. Last month's inflow to Lake Owyhee was 353 percent of the 1953-67 average. Forecasted streamflow is as follows:

	April-Sept. Forecast	Percent of 1953-67 Average
Jordan Creek above Lone Tree Creek	181,000 a.f.	213
Owyhee Reservoir Net Inflow	500,000 a.f.	167
Malheur near Drewsey	95,000 a.f.	132
Malheur, North Fork at Beulah	80,000 a.f.	133

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Average	Average
Bully Creek	Average	Average
Cow Creek	Average	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Average	Average
McDermitt Creek	Excellent	Average
Oregon Canyon Creek	Excellent	Average
Owyhee Project	Average	Average
Succor Creek	Average	Average
Tennile Creek	Excellent	Average
Vale-Oregon Irrig. Dist.	Average	Average
Warm Springs Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

Feb. 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Agency Valley	60.0	14.6	19.9	23.3
Antelope	55.0	18.6	5.1	5.7
Bully Creek	30.0	10.9	11.9	14.5
Owyhee	715.0	306.8	376.4	359.3
Warm Springs	191.0	23.1	77.0	74.6
Willow Creek #3	26.0	b	b	- -

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1780	Jordan Creek above Lone Tree Creek	180	April-July	85 ^m	212
		181	April-Sept.	85 ^m	213
2140	Malheur near Drewsey	135	Feb.-July	111	122
		95	April-Sept.	72	132
2175	Malheur, North Fork at Beulah	95	Feb.-July	76	125
		80	April-Sept.	60	133
1825	Owyhee Reservoir net Inflow	800	Feb.-July	438	183
		500	April-Sept.	300	167

SOIL MOISTURE

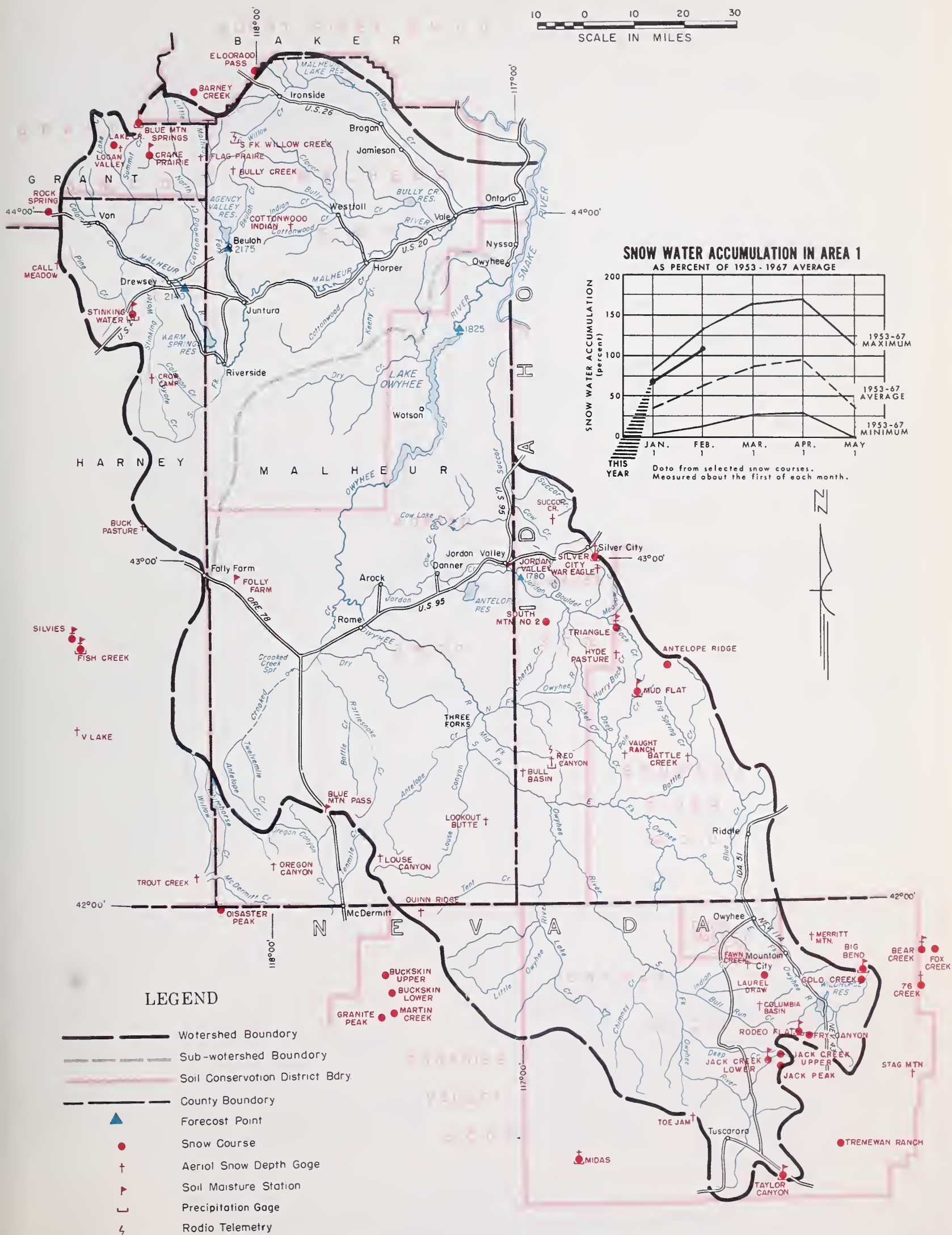
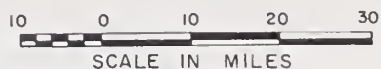
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	1/28	13.0	15.0	15.3
Blue Mountain Springs	5900	42	16.9	2/3	10.6	7.7	9.7
Crane Prairie	5375	48	18.2	c			
Folly Farm	4450	30	12.5	c			
Jack Creek, Lower (Nev.)	6800	48	8.6	c			
Jordan Valley	4390	48	19.3	2/4	15.8	- -	14.7
Mud Flat (Ida.)	5500	48	12.8	b			
Rodeo Flat (Nev.)	6800	42	11.0	1/29	11.0	10.4	10.5
Stinking Water Summit	4800	48	21.9	1/29	21.4	- -	- -
Taylor Canyon (Nev.)	6200	48	15.1	1/28	13.0	14.5	12.1
Triangle (Ida.)	5150	48	16.6	c			

SNOW

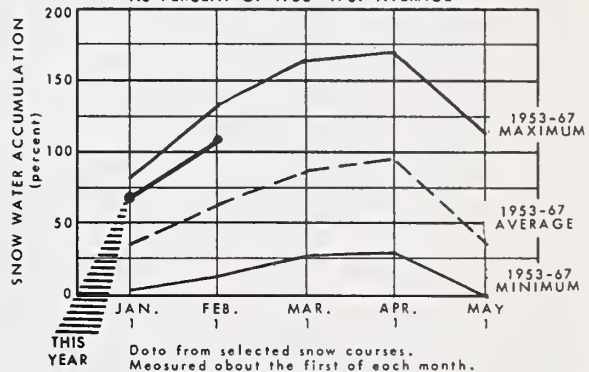
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Antelope Ridge (Ida.)	5900	1/28	43	12.4	2.8	3.4 ^h
Barney Creek	5950	1/29	31	8.0	6.7	- -
Battle Creek ^e (Ida.)	5700	2/1	18	5.0	0.6	2.8 ^m
Bear Creek ^e (Nev.)	7800	2/3	66	19.4	10.0	11.3 ^h
Big Bend (Nev.)	6700	1/28	33	7.9	2.2	5.3
Blue Mountain Springs	5900	2/3	57	15.0	7.4	10.4
Buck Pasture ^e	5700	2/4	6	1.2	T	1.6 ^m
Buckskin, Lower (Nev.)	6700	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 1
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▶ Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1953-1967 AVERAGE
NAME	ELEVATION					
Buckskin, Upper (Nev.)	7200	c				
Bull Basin ^e (Ida.)	5600	2/1	10	2.6	T	0.9 ^m
Bully Creek ^e	5300	2/4	12	3.2	1.6	2.3 ^m
Call Meadow ^e	5340	2/4	22	5.7	0.2	2.1 ^m
Columbia Basin ^e (Nev.)	6650	1/31	36	10.4	0.9	- -
Cottonwood-Indian ^e	4320	2/4	8	2.1	1.0	1.0 ^m
Crane Prairie	5375	c				
Crow Camp ^e	5500	2/4	18	4.7	0.0	1.2 ^m
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	1/30	25	4.2	2.7	2.5 ^h
Fawn Creek (Nev.)	7000	1/31	16	4.5	0.9	- -
Fish Creek ^e	7900	2/4	72	20.1	4.6	14.4 ^h
Flag Prairie ^e	4750	2/4	32	8.3	1.6	2.5 ^m
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	1/29	31	7.9	2.1	4.7
Gold Creek (Nev.)	6600	1/28	18	4.7	T	3.6
Granite Peak (Nev.)	7800	1/30	60	18.7	6.6	8.3 ^h
Hyde Pasture ^e (Ida.)	5800	2/1	35	9.8	1.6	3.8 ^m
Jack Creek, Lower (Nev.)	6800	c				
Jack Creek, Upper ^e (Nev.)	7250	1/31	20	5.6	1.1	5.1 ^h
Jack Peak (Nev.)	8420	c				
Lake Creek R. S.	5120	2/3	38	8.8	4.4	7.0 ^h
Laurel Draw (Nev.)	6700	b			5.4	4.8 ^h
Logan Valley	5100	1/28	28	6.7	2.6	5.1 ^m
Lookout Butte ^e	5650	2/1	7	1.8	T	0.1 ^m
Louse Canyon ^e	6440	2/1	24	6.7	1.2	2.0 ^h
Martin Creek (Nev.)	6700	1/30	52	16.2	5.8	5.7 ^h
Merritt Mountain ^e (Nev.)	7000	1/31	24	7.0	0.2	- -
Midas (Nev.)	7200	1/31	30	9.0	0.4	- -
Mud Flat (Ida.)	5500	b			2.4	3.4 ^h
Oregon Canyon ^e	6950	2/4	38	10.6	1.2	3.2 ^h
Quinn Ridge ^e (Nev.)	6300	2/1	17	3.4	1.2	1.6 ^h
Red Canyon ^e (Ida.)	6500	2/4	38	10.6	1.2	4.2 ^m
Rock Spring	5100	1/31	25	4.9	3.8	3.8
Rodeo Flat (Nev.)	6800	1/29	22	5.7	1.4	4.2
76 Creek (Nev.)	7100	1/21	60	18.0	3.1	6.1 ^h
Silver City (Ida.)	6400	b			6.3	9.2 ^h
Silvies ^e	6900	2/4	38	10.6	1.6	- -
South Mountain #2 (Ida.)	6340	2/4	52	18.2	4.2	6.6
Stag Mountain ^e (Nev.)	7800	b			1.1	- -
Stinking Water	4800	1/29	24	5.8	1.9	2.6 ^h
Succor Creek ^e (Ida.)	6100	2/1	17	4.8	1.4	4.4 ^m
Taylor Canyon (Nev.)	6200	1/28	26	6.1	3.5	3.6 ^h
Toe Jam ^e (Nev.)	7700	1/31	42	12.2	8.1	- -
Tremewan Ranch (Nev.)	5700	1/28	10	2.4	T	1.2 ^h
Triangle ^e (Ida.)	5150	2/1	10	2.6	T	0.8 ^m
Trout Creek ^e	7800	2/4	38	10.6	1.0	3.7
"V" Lake ^e	6600	2/4	38	10.6	0.2	2.5 ^m
Vaught Ranch (Ida.)	5950	2/1	21	5.9	1.2	- -
War Eagle (Ida.)	7700	b			8.4	- -

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Northeast Oregon can expect average water supplies this coming spring and summer.

SNOW COVER

January storms added generous amounts to the already above average snowpack. The snowpack is 132 percent of average.

PRECIPITATION

According to the U. S. Weather Bureau precipitation for the November-January winter period has been 134 percent of normal.. January was 155 percent of average.

SOIL MOISTURE

Soils are wetter than usual because of good fall precipitation and will absorb less than usual amounts from snowmelt..

RESERVOIR STORAGE

Wallowa Lake storage is excellent. It contains 27,000 acre feet compared to a normal of 21,600 a.f. Unity storage increased to 11,700 acre feet from last month's 8,600 acre feet. This compares to an average of 8,800 a.f. for February 1.

STREAMFLOW

Streamflow during January was mostly above average. The Grande Ronde at La Grande produced flows 195 percent of average for the month. Selected forecasts for the area are as follows:

	April-Sept. Forecast	Percent of 1953-67 Average
Grande Ronde at La Grande	200,000 a.f.	114
Powder near Baker	80,000 a.f.	129
Burnt near Hereford	47,000 a.f.	134
Wallowa, East Fk. near Joseph	13,800 a.f.	115
Eagle Creek near Skull Creek	215,000 a.f.	118
Imnaha near Imnaha	347,000 a.f.	106

Report prepared by
TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Average
Big Creek	Average	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Average	Average
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Average	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
La Grande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Average
Summerville	Average	Average
Sumpter Valley	Average	Average
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Thief Valley	17.4	b	b	- -
Unity	25.2	11.7	11.5	8.8
Wallowa Lake	37.5	27.0	23.6	21.6

SOIL MOISTURE

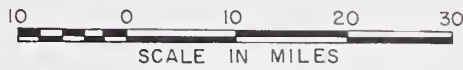
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Summit	5100	36	16.8	1/30	11.1	8.5	11.2
Dooley Mountain	5430	36	9.2	1/24	3.3	2.6	2.8
Emigrant Springs	3925	48	22.3	1/31	20.9	18.0	19.4
Ladd Summit	3730	48	18.9	1/24	10.3	10.5	10.2
Moss Springs	5850	42	25.8	1/27	14.9	14.8	- -
Tollgate	5070	48	23.6	1/30	18.0	19.0	18.6

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of February 1, 1969

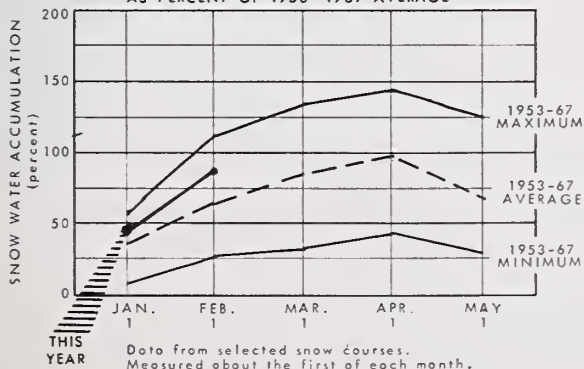
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3305	Bear near Wallowa	70	April-Sept.	66	106
2730	Burnt near Hereford	60	Feb.-June	48	125
		47	April-Sept.	35	134
3200	Catherine near Union	72	April-Sept.	64	112
2882	Eagle Creek abv. Skull Creek	198	April-July	168 ^m	118
		215	April-Sept.	182 ^m	118
3190	Grande Ronde at La Grande	242	March-Sept.	211	115
		200	April-Sept.	175	114
3295	Hurricane near Joseph	53	April-Sept.	47	113
2920	Imnaha at Imnaha	347	April-Sept.	327	106
3300	Lostine near Lostine	142	April-Sept.	125	114
2755	Powder near Baker	78	April-July	60	130
		80	April-Sept.	62	129
3250	Wallowa, East Fork near Joseph ^d	15.4	Feb.-Sept.	13.4	115
		13.8	April-Sept.	12.0	115

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 2
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Aneroid Lake #1	7480	1/29	102	32.8	21.8	24.0
Aneroid Lake #2	7300	1/29	87	29.8	18.8	21.6
Anthony Lake	7125	1/27	56	18.0	12.7	16.4
Bald Mountain ^e (Ore.)	6700	2/3	54	15.0	5.8	16.7 ^m
Barney Creek	5950	1/29	31	8.0	6.7	- -
Beaver Reservoir	5340	1/26	32	9.3	7.5	6.7
Big Sheep ^e	6200	2/3	84	25.0	22.0	18.0 ^m
Blue Mountain Summit	5098	1/30	35	8.4	5.2	5.6
Bourne	5800	1/28	51	13.2	8.8	10.3
County Line	4800	1/30	22	4.1	2.9	4.1
Dooley Mountain	5430	1/24	30	7.2	5.2	5.6
Eilertson Meadows	5400	1/27	45	12.5	8.5	7.6
Eldorado Pass	4600	1/30	25	4.2	2.7	2.5 ^h
Gold Center	5340	1/31	49	11.5	8.5	8.2
Goodrich Lake	6775	b			28.6	23.7 ^h
Intake House	4930	1/27	42	11.3	8.0	- -
Little Alps	6200	1/27	42	11.2	7.5	7.9 ^h
Little Antone	5000	1/27	28	6.6	4.6	- -
Lucky Strike	5050	b			6.4	8.0 ^h
Meacham	4300	1/29	32	8.1	2.8	6.3
Mirror Lake ^e	8200	2/3	159	47.5	50.0	44.7
Moss Springs	5850	1/27	51	15.0	11.2	14.7
Power Plant	3990	1/27	24	6.5	3.8	- -
Schneider Meadows	5400	2/4	92	26.2	17.2	19.4
Schoolmarm	4775	1/30	20	3.6	2.2	3.6
Standley ^e	7400	2/3	74	22.0	11.6	17.2 ^m
Taylor Green	5740	2/3	54	10.8	8.6	- -
Tipton	5100	1/30	39	7.8	6.0	6.9
Tollgate	5070	1/30	69	22.0	7.5	15.9
TV Ridge ^e	7000	2/3	53	15.0	6.8	- -

WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water users in Umatilla, Morrow and Gilliam Counties can expect average to above average water supplies in the spring and summer of 1969.

SNOW COVER

Snow accumulation as of February 1 was 145 percent of average on the Walla Walla, Umatilla, McKay and Butter Creek watersheds.

PRECIPITATION

Winter precipitation, November 1 to February 1, has been 129 percent of the 15-year average (1953-67) according to the U.S. Weather Bureau.

SOIL MOISTURE

Soils are well wetted because of above average fall precipitation. Profiles are 79 percent of capacity.

RESERVOIR STORAGE

Stored water in Cold Springs is 30,600 acre feet compared to 26,000 a year ago. McKay has 31,700 acre feet stored compared to 18,000 one year ago. Both reservoirs should fill to near usable capacity of 50,000 and 73,800 acre feet respectively, given normal winter conditions from this date.

STREAMFLOW

Forecasts of expected streamflow for the 1969 April through September period are as follows:

	<u>Volume Forecast</u>	<u>Percent of 1953-67 Average</u>
North Fork Walla Walla	25,000 a.f.	125
South Fork Walla Walla	89,000 a.f.	113
Umatilla at Pendleton	265,000 a.f.	127
McKay Creek	60,000 a.f.	118
*Butter Creek	16,000 a.f.	129

*This forecast is for the March through July period.

These forecasts assume near average conditions of temperature and precipitation for the balance of the winter-spring season.

Report prepared by
TOM GEORGE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, N. Fk.	Average	Average
Walla Walla River, S. Fk.	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Pine Creek	Average	Average
Umatilla River, Main	Average	Average
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla River (McKay Res.)	Average	Average
McKay Creek	Average	Average
Birch Creek	Average	Average
Butter Creek	Average	Average
Willow Creek	Average	Average
Rhea Creek	Average	Average
Rock Creek (John Day tributary)	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cold Springs	50.0	30.6	26.0	29.9
McKay	73.8	31.7	18.0	26.3

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0320	Butter Creek near Pine City	16.0	March-July	12.4	129
0225	McKay near Pilot Rock	60	Feb.-July	51	118
		33	April-Sept.	28	118
0200	Umatilla near Gibbon	124	March-Sept.	99	125
		97	April-Sept.	80	121
0210	Umatilla at Pendleton	265	March-Sept.	208	127
0110	Walla Walla, North Fork near Milton	25	March-Sept.	20	125
		19.0	April-Sept.	16.0	119
0100	Walla Walla, South Fork near Milton	89	March-Sept.	79	113
		78	April-Sept.	67	116

SOIL MOISTURE

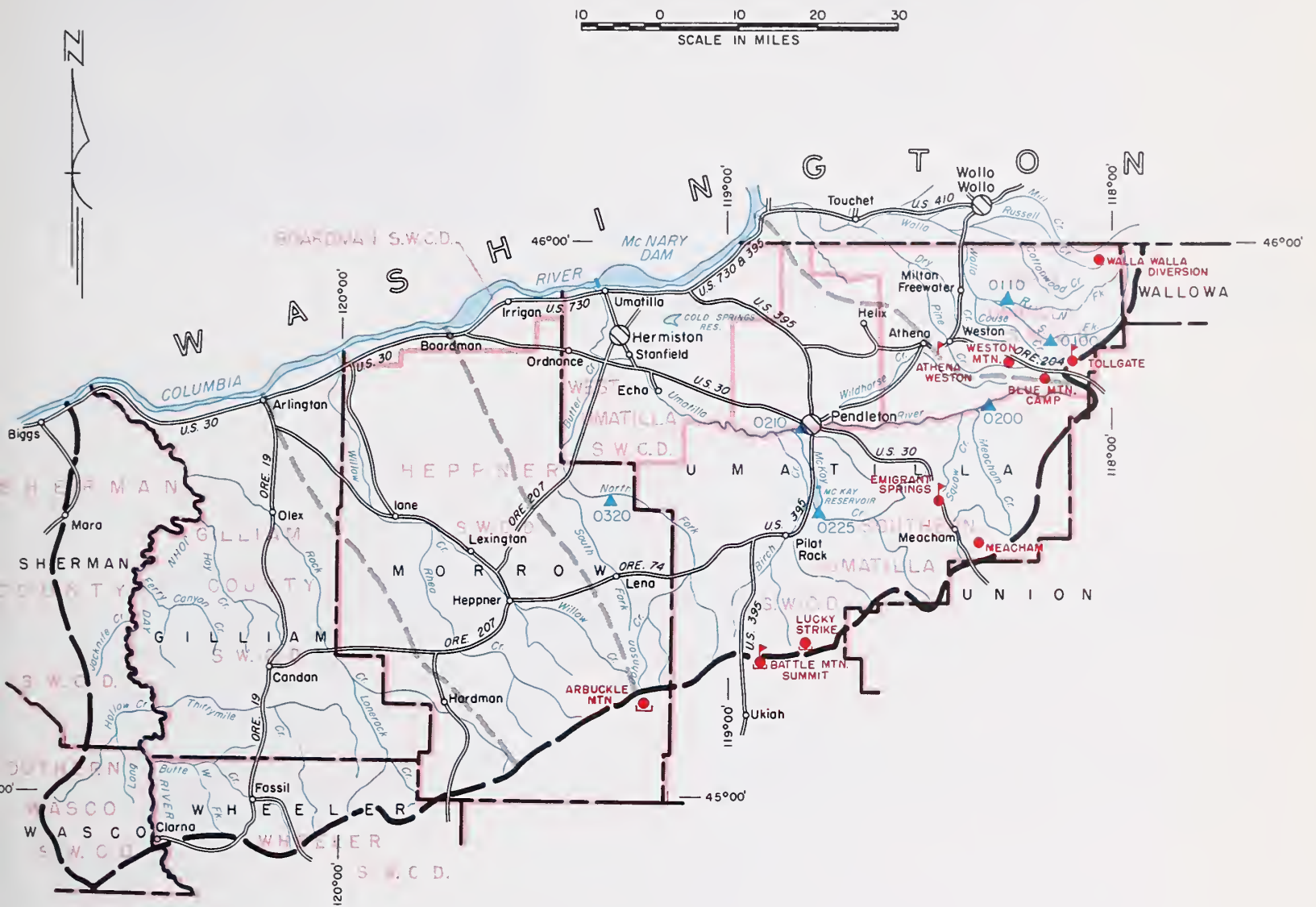
SOIL MOISTURE		PROFILE (Inches)		SOIL MOISTURE (Inches)			
STATION		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Athena-Weston	1700	48	18.7	1/30	11.6	11.3	11.2
Battle Mountain Summit	4340	48	13.8	1/23	13.7	12.4	13.8
Emigrant Springs	3925	48	22.3	1/31	20.9	18.0	19.4
Tollgate	5070	48	23.6	1/30	18.0	19.0	18.6

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Arbuckle Mountain	5400	2/8	36	10.6	3.6	7.2
Battle Mountain Summit	4340	1/23	14	2.4	0.8	1.8 ^m
Blue Mtn. Camp	4300	1/30	54	15.8	5.2	10.6 ^h
Emigrant Springs	3925	1/29	32	8.1	1.3	4.2
Lucky Strike	5050	^b			6.4	8.0 ^h
Meacham	4300	1/29	32	8.1	2.8	6.3
Tollgate	5070	1/30	69	22.0	7.5	15.9
Walla Walla Diversion	2400	2/1	30	8.6	-	2.0
Weston Mountain	2700	1/30	10	1.4	0.0	1.0 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

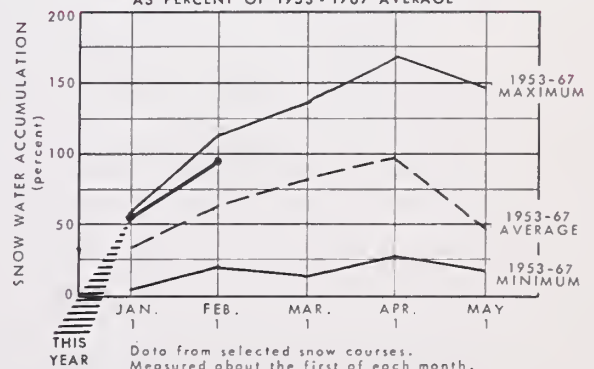


LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▲ Soil Moisture Station
- ⌈ Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3

AS PERCENT OF 1953-1967 AVERAGE



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of
FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers, farmers and other water users in the John Day Basin can expect above average water supplies during the coming irrigation season.

SNOW COVER

Although January storms were not as generous with snowfall in the area as in other parts of Oregon the snowpack is still considerably above average. The current snow cover is 132 percent of the 1953-67 average compared to last month's 142 percent.

PRECIPITATION

According to the U.S. Weather Bureau, precipitation for the November through January winter period was 133 percent of average. January precipitation was 119 percent of the normal.

SOIL MOISTURE

Soil profiles are wetter than usual and are at 86 percent of capacity. This will benefit the snowmelt runoff.

STREAMFLOW

Streamflow during January was above average in the basin. One hundred sixty seven thousand acre feet flowed past the gaging station on the John Day at Service Creek. This was 166 percent of average.

Forecasted streamflows for the April-September period are as follows:

	Volume Forecast	Percent of 1953-67 Average
John Day at Prairie City	60,000 a. f.	130
John Day, Mid. Fk. at Ritter	176,000 a. f.	152
Strawberry near Prairie City	9,800 a. f.	117

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Average	Average
Beech Creek-Fox-Long Cr.	Average	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Excellent	Average
Cherry Creek	Average	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Average	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Average	Average
Monument-Kimberly	Average	Average
Strawberry Creek	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

[illegible]

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ¹
NO.	NAME				
0385	John Day at Prairie City	66	March-July	51	129
		60	April-Sept.	46	130
0440	John Day, Middle Fork at Ritter	200	March-July	135	148
		176	April-Sept.	116	152
0375	Strawberry near Prairie City	9.2	March-July	7.9	117
		9.8	April-Sept.	8.4	117

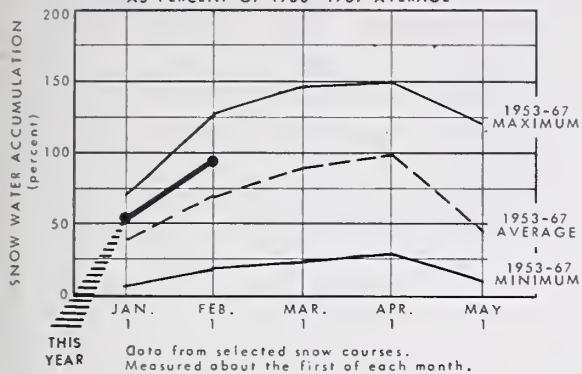
SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	13.8	1/23	13.7	12.4	13.8
Beech Creek	4800	48	21.3	2/4	14.2	9.6	14.0
Blue Mountain Springs	5900	42	16.9	2/3	10.6	7.7	9.7
Blue Mountain Summit	5100	36	16.8	1/30	11.1	8.5	11.2
Derr	5670	24	9.0	2/7	8.9	8.5	7.9
Marks Creek	4540	36	14.1	1/28	11.8	9.0	12.1
Snow Mountain	6300	48	16.7	1/30	14.3	- -	14.3
Starr Ridge	5150	36	10.6	2/4	10.5	7.8	10.4
Williams Ranch	4500	42	17.9	2/4	17.8	- -	17.6

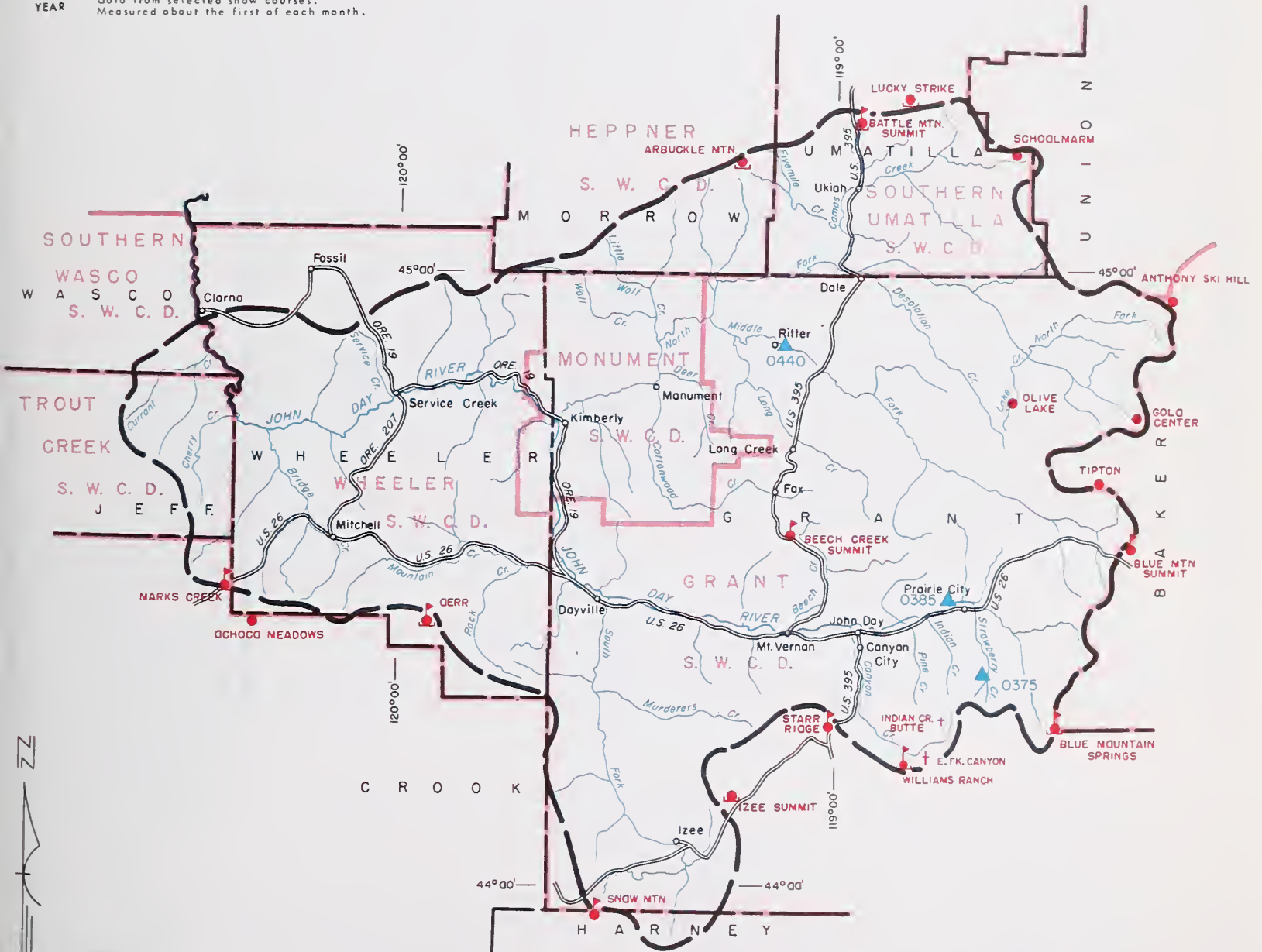
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 4
AS PERCENT OF 1953-1967 AVERAGE



10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- † Aerial Snow Depth Gauge
- ⊥ Precipitation Gauge

Upper John Day Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Anthony Lake	7125	1/27	56	18.0	12.7	16.4
Arbuckle Mountain	5400	2/8	36	10.6	3.6	7.2
Battle Mountain Summit	4340	1/23	14	2.4	0.8	1.8 ^m
Beech Creek Summit	4800	2/4	23	5.6	1.7	3.7 ^h
Blue Mountain Springs	5900	2/3	57	15.0	7.4	10.4
Blue Mountain Summit	5098	1/30	35	8.4	5.2	5.6
Derr	5670	2/7	37	9.4	2.8	6.6
East Fork Canyon ^e	5700	^c			1.5	- -
Gold Center	5340	1/31	49	11.5	8.5	8.2
Indian Creek Butte ^e	6550	^c			10.2	- -
Izee Summit	5293	1/30	30	6.3	2.9	5.4
Lucky Strike	5050	^b			6.4	8.0 ^h
Marks Creek	4540	1/28	24	4.3	0.8	3.1
Ochoco Meadows	5200	1/30	39	8.3	3.0	6.6
Olive Lake	6000	1/29	56	15.9	- -	12.2
Schoolmarm	4775	1/30	20	3.6	2.2	3.6
Snow Mountain	6300	1/30	46	10.5	- -	8.6 ^h
Starr Ridge	5150	2/4	25	7.0	2.0	4.1 ^h
Tipton	5100	1/30	39	7.8	6.0	6.9
Williams Ranch	4500	^b			0.0	0.9 ^m

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE

OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Most water users in the Crooked and Deschutes watersheds can expect average to above average water supplies next summer.

SNOW COVER

January storms brought generous amounts of snow to the upper mountain watersheds. The snow cover is currently 138 percent of average. The Hogg Pass Snow Course recorded 42.7 inches of water in the snowpack on February 1. This is the fourth highest measurement on record.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation for the winter period, November through January, has been 134 percent of average. January was 130 percent of the 1953-67 average.

SOIL MOISTURE

Soils on the upper watersheds are wetter than usual. They are currently 85 percent of capacity.

RESERVOIR STORAGE

Ochoco and Prineville Reservoirs currently contain 6,500 acre feet and 93,200 acre feet respectively. This is 29 percent and 92 percent of average. The Upper Deschutes reservoirs, Crane Prairie, Crescent Lake and Wickiup currently contain a total of 174,100 acre feet compared to an average of 252,500 acre feet.

STREAMFLOW

Forecasted streamflow for the April-September period are as follows:

	Volume <u>Forecast</u>	Percent of 1953-67 <u>Average</u>
Crane Prairie Res. total Inflow	126,000 a.f.	117
Crescent at Crescent Lake	28,000 a.f.	100
Deschutes at Benham Falls	552,000 a.f.	93
Little Deschutes near La Pine	100,000 a.f.	105
Squaw Creek near Sisters	57,000 a.f.	112
Tumalo Creek near Bend	55,000 a.f.	112
Crooked at Post	101,000 a.f.	119
Ochoco Res. net Inflow	28,000 a.f.	122

These forecasts assume average conditions of temperature and precipitation from now to the end of the forecast period.

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

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PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD		RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
	SPRING SEASON	LATE SEASON			THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Arnold Irrigation District	Average	Average	Crane Prairie	55.3	31.0	31.5	44.4
Bear Creek	Average	Average	Crescent Lake	86.9	29.5	42.5	47.3
Beaver Creek	Average	Average	Ochoco	47.5	6.5	15.4	22.2
Camp Creek	Average	Average	Prineville	153.0	93.2	92.7	100.7
Central Ore. Irrig. Dist.	Average	Average	Wickiup	200.0	113.6	123.8	160.8
Crooked River	Average	Average					
Deschutes River	Average	Average					
Hay-Trout Creeks	Average	Average					
Lone Pine Irrig. Dist.	Average	Average					
Mill Creek	Average	Average					
North Unit Irrig. Dist.	Average	Average					
Ochoco Creek	Average	Average					
Sisters Irrig. Dist.	Average	Average					
Snow Creek Irrig. Dist.	Average	Average					
Squaw Creek Irrig. Dist.	Average	Average					
Swalley Ditch	Excellent	Excellent					
Tumalo Project	Average	Average					
Walker Basin Irrig. Dist.	Average	Average					

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

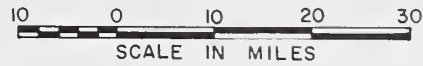
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	148	April-Sept.	126	117
0600	Crescent at Crescent Lake ^a	25	March-July	26	96
		28	April-Sept.	28	100
0795	Crooked near Post	200	Feb.-July	173	116
		120	April-Sept.	101	119
0645	Deschutes at Benham Falls ^d	367	April-July	393	93
		552	April-Sept.	596	93
0500	Deschutes below Snow Creek	90	Feb.-Sept.	79	114
		79	April-Sept.	66	120
0630	Deschutes, Little near Lapine ^d	120	Feb.-July	113	106
		100	April-Sept.	95	105
0848	Ochoco Reservoir net Inflow	45	Feb.-June	38	118
		28	April-Sept.	23	122
0555	Odell near Crescent	35	April-Sept.	30	117
0750	Squaw near Sisters	57	April-Sept.	51	112
0730	Tumalo near Bend ^d	55	April-Sept.	49	112

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Derr	5670	24	9.0	2/7	8.9	8.5	7.9
Marks Creek	4540	36	14.1	1/28	11.8	9.0	12.1
Snow Mountain	6300	48	16.7	1/30	14.3	- -	14.3

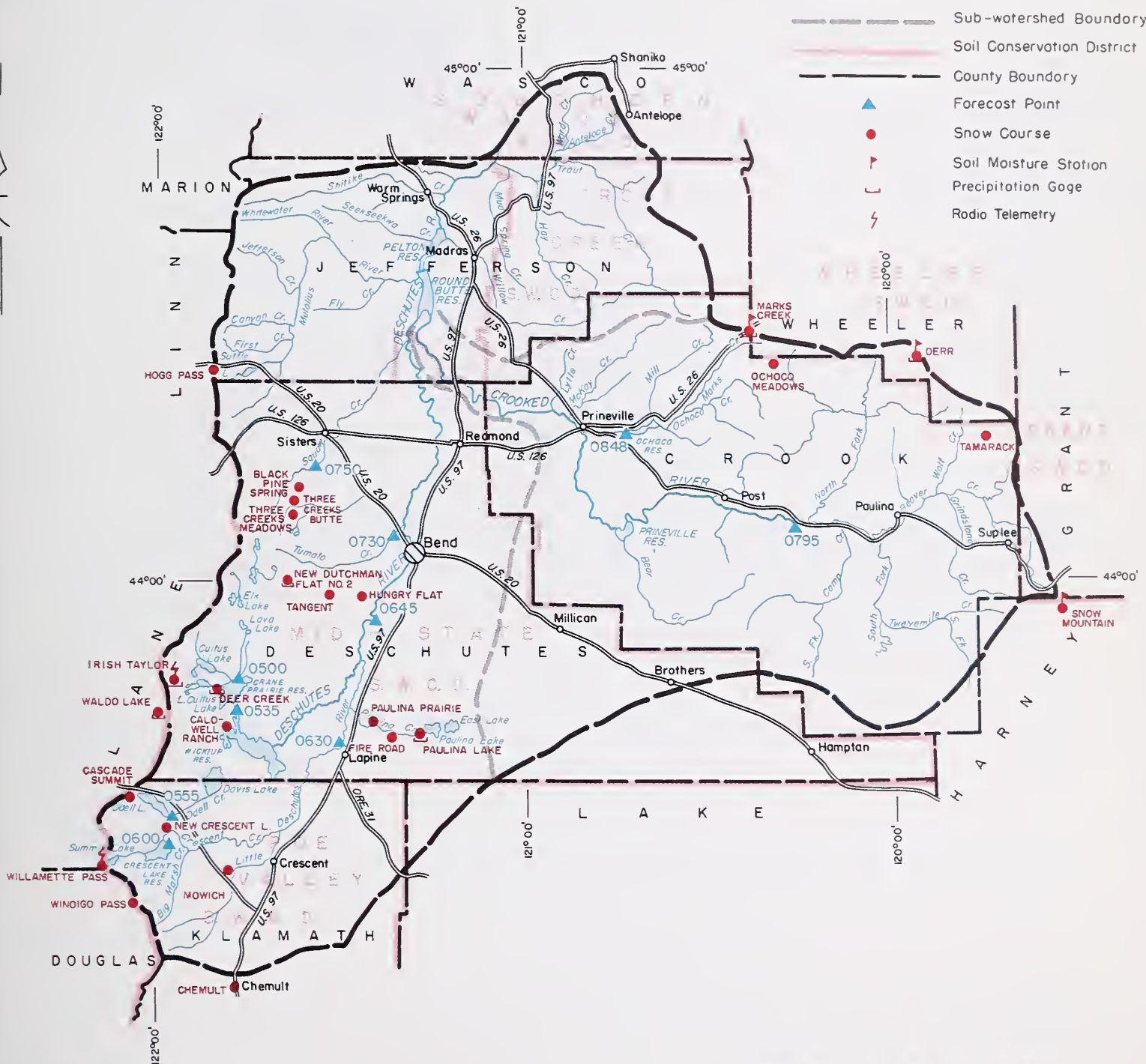
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS

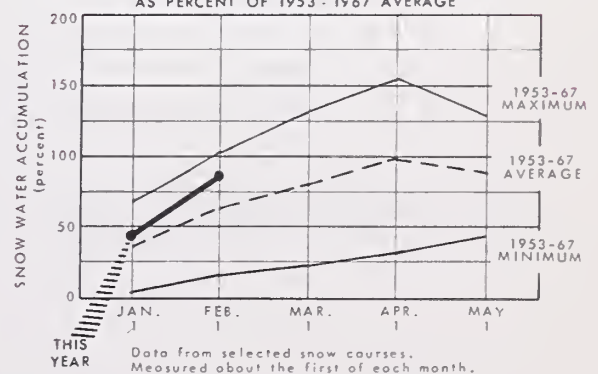


LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry



SNOW WATER ACCUMULATION IN AREA 5
AS PERCENT OF 1953-1967 AVERAGE



Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Black Pine Spring	4600	1/28	34	8.1	1.1	3.0 h
Caldwell Ranch	4400	2/5	48	13.1	6.8	8.4 h
Cascade Summit	4880	1/31	104	27.0	8.7	10.3
Chemult	4760	2/3	44	12.5	6.0	8.4
Deer Creek	4554	2/5	69	19.6	10.2	- -
Derr	5670	2/7	37	9.4	2.8	6.6
Fire Road	5050	DISCONTINUED				
Hogg Pass	4755	2/3	138	42.7	21.8	25.6
Hungry Flat	4400	1/30	37	7.7	3.5	5.1
Irish Taylor	5500	2/5	111	35.9	16.1	23.3
Marks Creek	4540	1/28	24	4.3	0.8	3.1
Mowich	4700	1/27	28	5.5	5.1	4.2 h
New Créscent Lake	4800	1/27	57	14.7	6.9	10.5
New Dutchman Flat #2	6400	1/30	120	37.1	18.5	31.8
Ochoco Meadows	5200	1/30	39	8.3	3.0	6.6
Paulina Lake	6330	DISCONTINUED				
Paulina Prairie	4285	DISCONTINUED				
Snow Mountain	6300	1/30	46	10.5	- -	8.6 h
Tamarack	4800	1/31	21	4.3	3.2	4.3 h
Tangent	5400	1/30	72	19.1	12.6	15.4
Three Creeks Butte	5200	1/28	54	14.1	6.6	8.0 h
Three Creeks Meadows	5650	1/28	63	18.2	8.6	12.3
Waldo Lake	5500	1/31	104	26.4	12.2	19.7
Willamette Pass	5600	b			16.6	26.2
Windigo Pass	5800	b			12.4	28.2

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, orchardists and other water users in the Hood River-Wasco County area can expect average to above average water supplies in the spring and summer of 1969. Snowpacks are about twice the usual amounts and the streamflow forecasts for April through July are 130 to 166 percent of the 1953-67 average.

SNOW COVER

Generous amounts of snow during January brought the water content of the mountain snowpack to 227 percent of the 15-year average (1953-67) and 387 percent of the amount measured at this time last year. The Phlox Point Snow Course set a new record for the February 1 measurement with 76.4 inches of water.

PRECIPITATION

Winter precipitation, November 1 to February 1, has been 103 percent of the average according to the U. S. Weather Bureau.

SOIL MOISTURE

Watershed soils under the snowpack are apparently well wetted due to the slightly above average precipitation and will favor the snowmelt runoff in the spring.

STREAMFLOW

Forecasts of expected streamflow for the 1969 period April through September are as follows:

<u>Station</u>	<u>Volume</u>	Percent of 1953-67 <u>Average</u>
Hood R. near Hood River	450,000 a.f.	134
Hood R., West Fork near Dee	218,000 a.f.	135
White R. below Tygh Valley	232,000 a.f.	161

These forecasts are made on the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
TOM GEORGE

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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Cr.)	Excellent	Average
Badger Creek	Excellent	Average
Dee Irrigation District	Excellent	Average
East Fork Irrig. Dist.	Excellent	Average
Farmers Irrigation Dist.	Excellent	Average
Hood River Irrig. Dist.	Excellent	Average
Juniper Flat	Excellent	Average
Middle Fork Irrig. Dist.	Excellent	Average
Mile Creeks	Excellent	Average
Mill Creek	Excellent	Average
Mount Hood Irrig. Dist.	Excellent	Average
Rock-Gate-Threemile Crs.	Excellent	Average
Tygh Creek	Excellent	Average
White River	Excellent	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	11.9	b	0.0	2.6

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Cooper Spur	3490	72	26.4	2/4	14.2	13.9	- -

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1210	Hood River near Hood River ^d	367	April-July	282	130
		450	April-Sept.	336	134
1185	Hood, West Fork near Dee	190	April-July	140	136
		218	April-Sept.	161	135
1015	White below Tygh Valley	213	April-July	128	166
		232	April-Sept.	144	161

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Brooks Meadows	4300	c				
Clear Lake	3500	1/31	77	19.6	2.8	5.9 ^h
Clear Lake (Experimental)	3500	1/31	91	23.3	5.9	9.8 ^h
Cooper Spur	3490	2/6	73	25.0	5.3	7.5 ^h
Greenpoint Reservoir	3400	2/3	92	28.6	7.3	9.7
Knebal Springs	3850	c				
Lambert Point	7000	b				
Parkdale	1770	2/6	29	10.8	0.5	0.8 ^m
Phlox Point	5400	2/3	175	76.4	20.0	35.8
Red Hill	4400	1/25	127	48.1	11.9	23.1
Still Creek	3670	2/3	113	33.3	9.7	13.8
Switchback	3255	2/4	80	30.4	5.3	- -
Tilly Jane	6000	1/19	115	37.6	12.1	24.0
Ulrich Ranch Junction	3350	c				
Umbrella Falls	5400	2/1	197	59.0	40.7	- - ^h
Upper Valley	2530	2/6	58	21.8	2.1	2.7 ^h

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

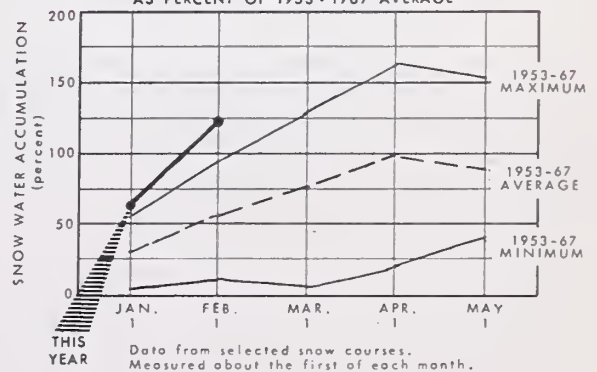


LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ⬮ Soil Moisture Station
- ⊥ Precipitation Gage
- ⊙ Temperature Gage
- ⚡ Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6

AS PERCENT OF 1953-1967 AVERAGE



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The entire United States portion of the Columbia Basin has the prospect of a good to excellent water supply next summer. Near average or above flows are anticipated for the Upper Columbia and its tributaries in British Columbia. Streams in Idaho and Montana are currently expected to contribute flows to the Columbia which will range from a third to nearly double their normal amounts. Streams in Washington and Oregon will also yield substantial amounts.

RESERVOIR STORAGE

Storage in the main irrigation reservoirs is generally average or above in most of the basin. Reservoirs in southern Idaho and Oregon, which were affected by last years drought, are deficient but should be restored to normal or better conditions by the 1969 runoff.

SNOW COVER

New record high snowpack readings for February 1 have been established at many snow courses in Oregon, Washington and Idaho. In many cases the snowpack already equals or considerably exceeds the April 1st average water content. In most areas it ranges from about 120 to near 300 percent of average.

SOIL MOISTURE

Soil moisture continues in an above average condition, with many areas already at or near field capacity.

STREAMFLOW

The flow of the Columbia River at The Dalles, Oregon, as reported by the U.S. Geological Survey, has remained above average during the fall and mid-winter months. The record by months for the 1969 water year is as follows:

<u>Month</u>	<u>Percent of Average Discharge (1953-67)</u>			
October	119	(Adjusted for Storage)		
November	128	"	"	"
December	104	"	"	"
January	134	"	"	"

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1057	Columbia at The Dalles	86,200 122,000	April-June April-Sept.	72,406 105,176	119 116

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- 50 River Miles
- Snow Course
- 9 Temperature
- ⚡ Radio Telemetry

COLUMBIA RIVER BASIN



"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

The outlook for 1969 spring and summer water supplies in the Willamette Valley is above average as a result of abundant snowfall during January.

SNOW COVER

Water content of the mountain snowpack has increased to 188 percent of average for February 1. Phlox Point snow course near Timberline Lodge on Mt. Hood is 213 percent of average and Santiam Junction Snow Course is 190 percent of average. New record amounts for February 1 were measured on Mt. Hood.

SOIL MOISTURE

Soils are well wetted from above average rainfall during November and December.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation in the Willamette Valley during January was 122 percent of average. It is 125 percent for the winter period, November through January.

RESERVOIR STORAGE

Most reservoirs in the Willamette Basin are currently at low levels to provide for interception of large amounts of runoff water.

STREAMFLOW

Flow of the Middle Fork of the Willamette below the North Fork for October through January was 113 percent of average. Streamflow forecasts for this area during the April-September period range from 111 percent on the Row near Dorena to 139 percent for the Clackamas above Three Lynx. The Middle Fork of the Willamette near Oakridge is forecast at 992,000 acre feet or 120 percent for the same period.

If average amounts of snow are received during the next several months, good water supplies are the prospect for next summer.

Report prepared by

TOM GEORGE

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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD		RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
	SPRING SEASON	LATE SEASON			THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Calapooya	Excellent	Average	Cottage Grove	30.0*	0.0	0.5	2.5
Clackamas	Excellent	Average	Cougar	155.2*	0.0	0.7	- -
McKenzie	Excellent	Average	Detroit	299.9*	0.0	2.5	41.9
Molalla	Excellent	Average	Dorena	70.5*	0.0	0.4	9.6
Santiam, North	Excellent	Average	Fall Creek	115.0*	0.0	0.4	- -
Santiam, South	Excellent	Average	Fern Ridge	94.2*	0.7	8.0	20.8
Willamette, Coast Fork	Excellent	Average	Foster	30.0*	0.9	0.2	- -
Willamette, Middle Fork	Excellent	Average	Green Peter	270.0*	0.0	4.8	- -
			Hills Creek	200.0*	0.0	0.6	178.4 ^m
			Lookout Point	337.2*	0.0	1.5	47.1 ^m
			Timothy Lake	61.7	51.6	49.9	45.5 ^m
			*Multiple purpose reservoir--space reserved primarily for flood runoff.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

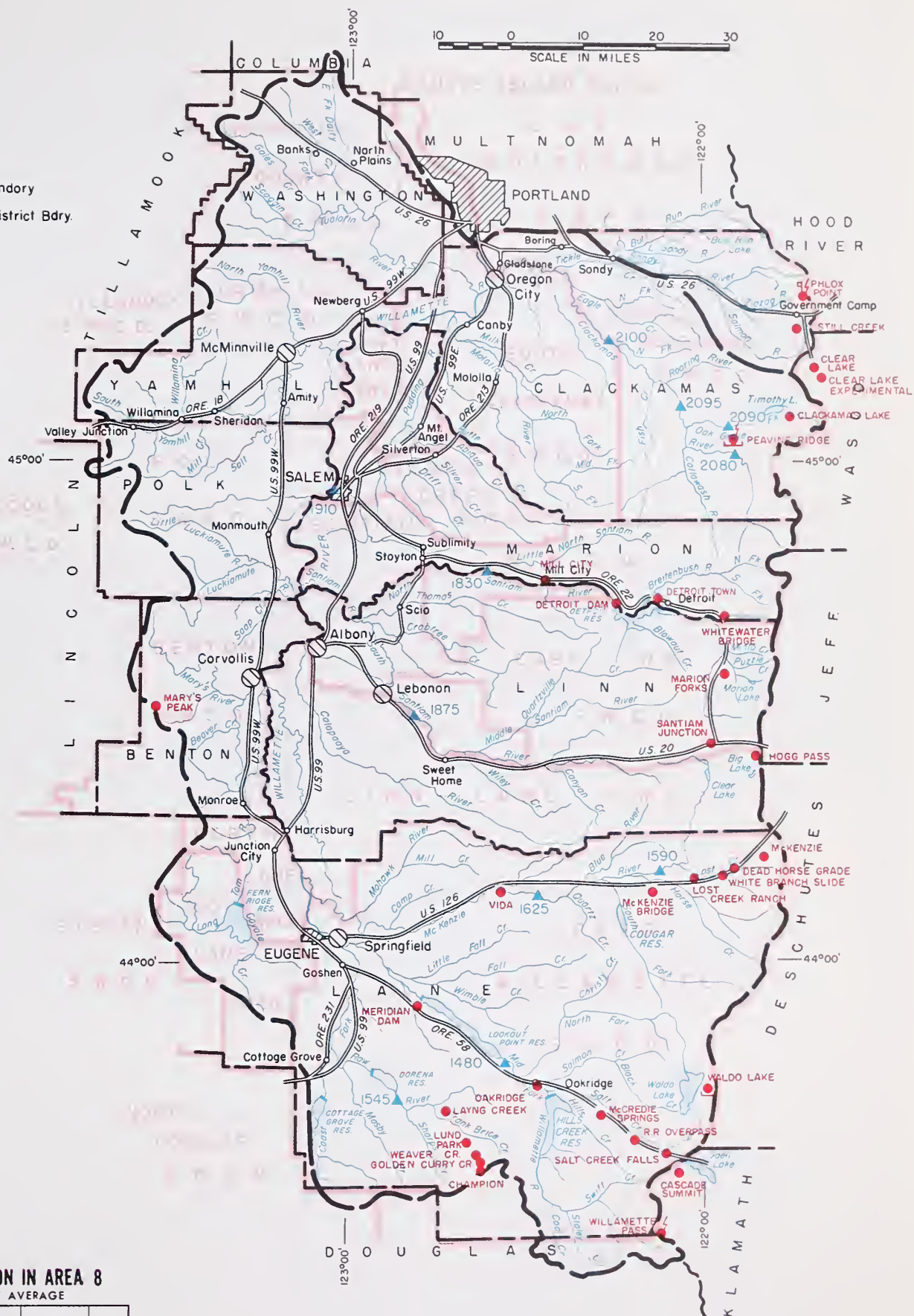
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953- 67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ^t
NO.	NAME				
2080	Clackamas at Big Bottom	186	April-July	134	138
		203	April-Sept.	166	122
2100	Clackamas at Estacada	900	April-July	689	131
		1020	April-Sept.	800	127
2095	Clackamas above Three Lynx	702	April-July	517	137
		846	April-Sept.	610	139
1590	McKenzie at McKenzie Bridge	581	April-July	465	125
		755	April-Sept.	614	123
1625	McKenzie near Vida	1304	April-July	1087	120
		1572	April-Sept.	1321	119
2090	Oak Grove Fork above Power Intake	171	April-July	125	137
		223	April-Sept.	163	137
1545	Row near Dorena	116	April-July	106	109
		122	April-Sept.	110	111
1830	Santiam, North at Mehama ^d	987	April-July	800	123
		1036	April-Sept.	901	115
1875	Santiam, South at Waterloo	710	April-July	596	120
		740	April-Sept.	633	117
1840	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	888	April-July	725	122
		992	April-Sept.	828	120
1910	Willamette at Salem ^d	5677	April-July	4696	121
		6233	April-Sept.	5199	120

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

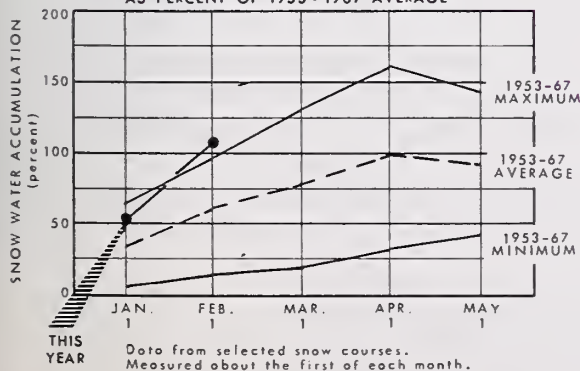
WILLAMETTE WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Radio Telemetry
- ⌋ Precipitation Gage
- 9 Temperature Gage



SNOW WATER ACCUMULATION IN AREA 8 AS PERCENT OF 1953-1967 AVERAGE



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Cascade Summit	4880	1/31	104	27.0	13.8	19.1
Champion	4500	b			19.4	16.4
Clackamas Lake	3400	c				
Clear Lake	3500	1/31	77	19.6	2.8	5.9
Clear Lake (Experimental)	3500	1/31	91	23.3	5.9	9.8 ^h
Dead Horse Grade	3800	2/7	86	25.7	9.0	10.7
Detroit Town	1610	1/30	50	9.7	2.1	1.4
Detroit Dam	1580	1/30	46	9.5	0.0	0.3
Golden Curry Creek	3136	b			4.1	3.7
Hogg Pass	4755	2/3	138	42.7	21.8	25.6
Layng Creek	1200	1/31	28	3.4	4.4	7.0 ^h
Lost Creek Ranch	1956	2/4	60	14.9	4.6	2.8
Lund Park	1740	b			T	0.4
Marion Forks	2730	1/30	82	18.0	11.2	8.2 ^h
Marys Peak	3620	2/7	105	30.4	- -	4.0
McCredie Springs	2120	1/30	30	5.0	0.0	0.2
McKenzie	4800	2/7	131	44.4	21.0	27.6
McKenzie Bridge	1372	2/4	36	10.3	T	0.3
Meridian Dam	750	1/30	26	3.7	0.0	0.0
Mill City	826	1/30	26	7.8	0.0	T
Oakridge	1310	1/30	24	2.9	0.0	T
Peavine Ridge	3500	2/4		27.2 ^g	9.5	10.7 ^h
Phlox Point	5400	2/3	175	76.4	20.0	35.8
Railroad Overpass	2750	1/30	35	6.6	T	2.1
Salt Creek Falls	4000	1/31	80	18.7	10.2	10.0
Santiam Junction	3990	1/30	110	28.1	17.0	14.8
Still Creek	3670	2/3	113	33.3	9.7	13.8
Vida	800	2/4	29	7.3	0.0	T
Waldo Lake	5500	1/31	104	26.4	12.2	19.7
Weaver Creek	2440	b			1.6	1.0
White Branch Slide	2800	2/4	73	19.0	7.2	4.0
Whitewater Bridge	2175	1/30	61	14.7	5.8	3.7
Willamette Pass	5600	b			16.6	26.2

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water users in Josephine, Jackson and Douglas Counties can expect adequate to above average water supplies this spring and summer.

SNOW COVER

January storms brought generous amounts of snow to mountain watersheds. The snow cover is currently 166 percent of average. New record amounts of snow water for February 1 were measured at Grayback Peak (41.6"), Siskiyou Summit (18.2"), Fish Lake (20.3) and Hyatt Prairie Reservoir (15.3") Snow Courses.

PRECIPITATION

Winter precipitation for the November-January period was 117 percent of average, according to the U. S. Weather Bureau. Precipitation during January was 123 percent of the 1953-67 average.

RESERVOIR STORAGE

As of February 1, Emigrant Lake contained 22,900 acre feet compared to an average of 22,400 a.f. Howard Prairie and Hyatt Prairie were holding 18,700 acre feet and 8,400 acre feet respectively. These compare to averages of 32,400 acre feet and 9,800 acre feet. Fish Lake contained 3,200 acre feet compared to its average of 5,500 acre feet. No report was available for Fourmile Lake.

STREAMFLOW

Expected streamflow this summer is as follows:

<u>Stream</u>	<u>Period</u>	<u>Volume</u>	<u>Percent 1953-67 Average</u>
Fourmile Lk. Net Inflow	Apr-Sept	7,900 a.f.	193
Hyatt Res. Net Inflow	Apr-Sept	9,400 a.f.	180
Little Butte, S. Fk. nr. Lake Cr.	Apr-July	48,000 a.f.	145
Rogue at Raygold	Apr-Sept	990,000 a.f.	105
Applegate near Copper	Apr-Sept	200,000 a.f.	142
Illinois near Kerby	Apr-Sept	268,000 a.f.	127
Umpqug, No. below Lemolo Res.	Apr-Sept	179,000 a.f.	102

These forecasts assume normal climatic conditions from now to the end of the forecast period.

Report prepared by
TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Excellent	Average
Applegate River, Big	Excellent	Average
Applegate River, Little	Excellent	Average
Ashland Creek	Excellent	Average
Butte Creek, Big	Excellent	Average
Butte Creek, Little	Excellent	Average
Cow Creek	Average	Average
Deer Creek	Average	Average
Elk Creek	Excellent	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Average	Average
Gold Hill Irrig. Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Average	Average
Illinois River, East Fork	Excellent	Average
Illinois River, West Fork	Excellent	Average
Jump-off-Joe Creek	Average	Average
Neil Creek	Excellent	Average
Red Blanket Creek	Average	Average
Rogue River	Average	Average
Sucker Creek	Excellent	Average
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Excellent	Average
Wagner Creek	Excellent	Average
Williams Creek	Excellent	Average

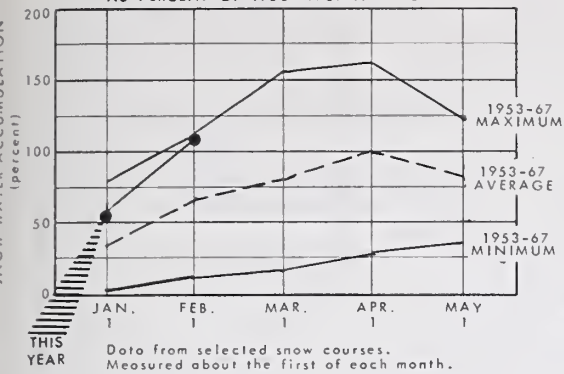
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Emigrant Lake	39.0	22.9	19.3	22.4*
Fish Lake	7.8	3.2	3.6	5.5
Fourmile Lake	16.1			9.6
Howard Prairie	60.0	18.7	39.2	32.4
Hyatt Prairie	16.1	8.4	9.0	9.8
*Average for years of record after reconstruction (in base period).				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3620	Applegate near Copper	200	April-Sept.	140	142
3145	Clearwater above Trap Creek ^d	70	April-Sept.	73	96
5045	Fourmile Lake net Inflow	7.9	April-Sept.	4.1	193
		8.8	Feb.-Sept.	5.2	169
5140	Hyatt Reservoir net Inflow ^d	9.4	April-Sept.	5.2	180
3771	Illinois River near Kerby	431	March-July	325	133
		268	April-Sept.	211	127
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr. ^d	18.0	April-Sept.	14.4	125
3415	Little Butte, S. Fk. near Lake Creek	48	April-July	33	145
	Note: Minimum flow will drop to 100 c.f.s. by May 30.				
3280	Rogue above Prospect	323	April-July	269	120
3320	Rogue, South Fork near Prospect ^d	75	April-July	62	121
		86	April-Sept.	74	116
3350	Rogue below South Fork	654	April-July	570 ^h	115
		805	April-Sept.	708 ^h	114
3590	Rogue at Raygold near Central Point	830	April-July	781	106
		990	April-Sept.	941	105
3615	Rogue at Grants Pass ^d	950	April-Sept.	940	101
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	179	April-Sept.	176	102

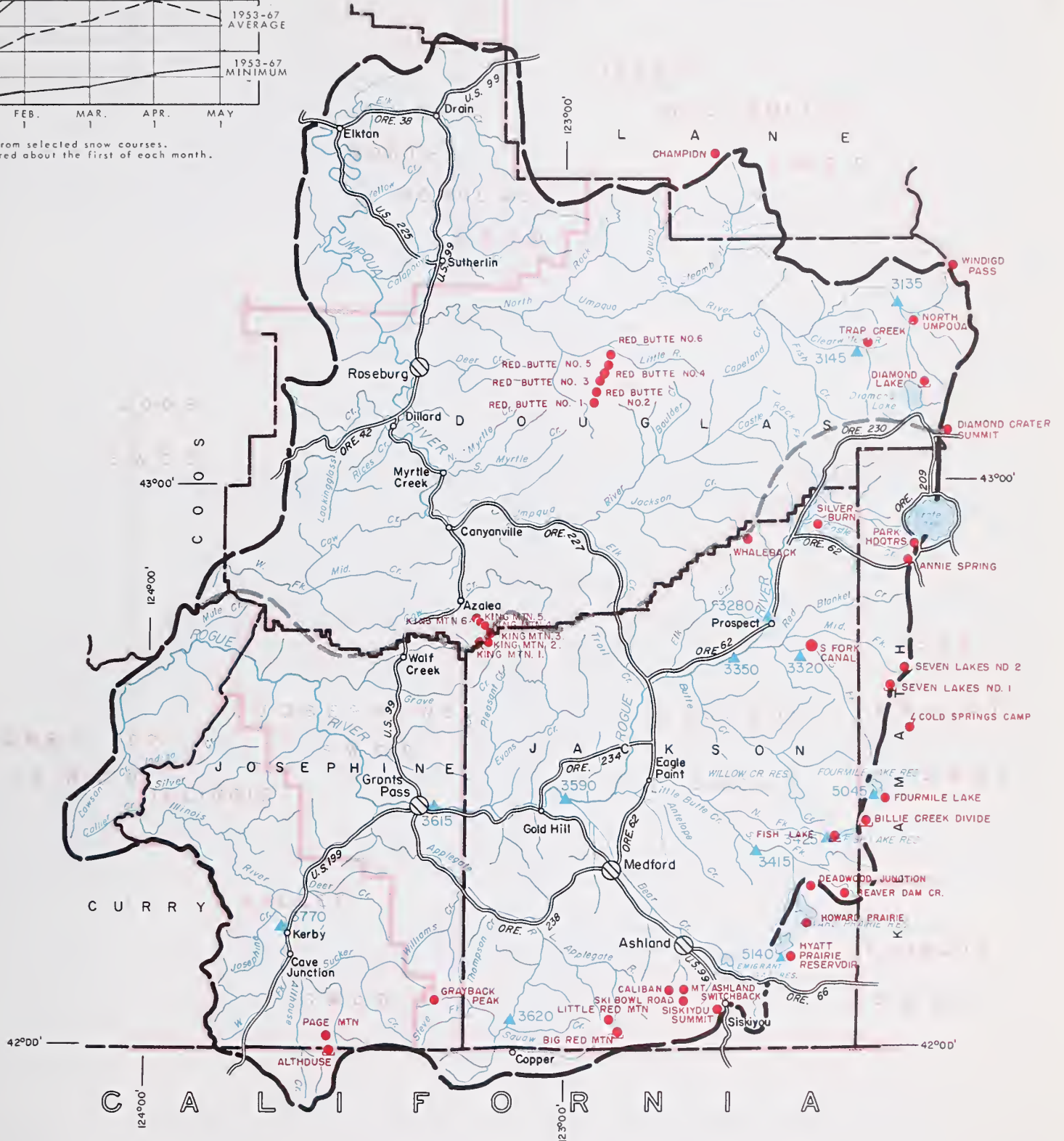
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

SNOW WATER ACCUMULATION IN AREA 9 AS PERCENT OF 1953-1967 AVERAGE



ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Precipitation Gage
- Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Althouse	4530	c			- -	5.0
Annie Spring	6018	1/28	133	40.5	21.2	27.8
Beaver Dam Creek	5100	1/31	66	20.8	9.7	8.1 ^m
Big Red Mountain	6500	2/5	111	35.8	17.4	19.8
Billie Creek Divide	5300	1/24	79	24.2	10.0	14.2 ^h
Caliban	6500	2/3	115	35.3	27.0	- -
Champion	4500	b			19.4	16.4
Cold Springs Camp	6100	1/31	122	35.4	15.4	21.9 ^h
Deadwood Junction	4600	1/31	58	16.3	7.2	6.3 ^h
Diamond Crater Summit	5800	1/27	103	28.5	12.6	22.7 ^h
Diamond Lake	5315	1/27	69	17.2	9.8	14.6
Fish Lake	4865	1/29	68	20.3	4.6	14.4 ^h
Fourmile Lake	6000	c			- -	17.0 ^h
Grayback Peak	6000	2/2	132	41.6	17.7	18.6 ^h
Howard Prairie	4500	1/31	54	15.0	8.6	6.4 ^h
Hyatt Prairie Reservoir	4900	1/31	53	15.3	6.4	5.9 ^h
King Mountain #1	4500	b			6.6	- -
King Mountain #2	4000	b			8.0	- -
King Mountain #3	3648	b			T	- -
King Mountain #4	3049	b			0.0	- -
King Mountain #5	2380	b			0.0	- -
King Mountain #6	1820	b			0.0	- -
Little Red Mountain	6500	2/6	100	31.6	14.3	15.2 ^h
Mt. Ashland Switchback	6400	1/30	129	38.0	27.0	- -
North Umpqua	4215	1/31	63	14.5	9.3	10.4
Page Mountain	4045	b			2.6	3.9 ^h
Park Headquarters	6450	1/28	153	50.3	25.6	36.5 ^h
Red Butte #1	4560	1/24	59	18.5	9.3	9.9 ^h
Red Butte #2	4000	1/24	36	11.4	6.5	6.7 ^h
Red Butte #3	3500	1/24	28	6.9	T	4.1 ^h
Red Butte #4	3000	1/24	18	4.7	0.0	2.9 ^h
Red Butte #5	2500	1/24	12	3.2	0.0	0.6 ^m
Red Butte #6	2000	1/24	5	0.3	0.0	0.0 ^m
Seven Lakes #1	6800	1/29	160	49.7	21.4	35.5
Seven Lakes #2	6200	1/29	131	38.2	16.7	25.8 ^h
Silver Burn	3720	1/30	74	19.4	10.2	9.8
Siskiyou Summit	4630	1/28	65	18.2	8.0	6.6
Ski Bowl Road	6000	1/30	119	33.0	22.6	- -
South Fork Canal	3500	1/30	31	7.0	1.7	2.8
Trap Creek	3800	1/31	60	14.3	8.5	8.6 ^h
Whaleback	5140	1/31	112	30.4	19.5	21.7 ^h
Windigo Pass	5800	b			12.4	28.2

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

GENERAL OUTLOOK

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

Streamflow in Klamath Basin for the February through June period in 1969 will be above average, and average to above average supplies of irrigation water will be available for this region. Mountain snowpacks are much above average and soil moisture is about average for this period.

SNOW COVER

Water content of the mountain snowpack is 168 percent of the 15-year average (1953-67) for February first, compared to 73 percent of average for one year ago.

PRECIPITATION

Winter precipitation, November 1 to February 1, was 124 percent of the average, according to the U. S. Weather Bureau.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is up to 71 percent of capacity, which is slightly wetter than usual.

RESERVOIR STORAGE

Upper Klamath Lake contains 405,300 acre feet of water compared with 320,000 last year.

Gerber Reservoir now holds 26,100 acre feet compared to 44,800 acre feet last year. Clear Lake Reservoir holds 177,200 acre feet compared with 182,000 acre feet on February 1, 1968. Above average mountain snowpacks and average moisture conditions for the remainder of the winter-spring season should fill all reservoirs to capacity.

STREAMFLOW

Forecasts of expected streamflow in the February through September period of 1969 are as follows:

<u>Station</u>	<u>Volume</u>	<u>Percent of 1953-67 Average</u>
Clear Lake Reservoir Inflow	163,000 a.f.	187
Gerber Reservoir Inflow	81,000 a.f.	188
Sprague River near Chiloquin	440,000 a.f.	109
Inflow to Upper Klamath Lk.	1,080,000 a.f.	113
Williamson River blw. Sprague	708,000 a.f.	104

These forecasts assume near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

Report prepared by
TOM GEORGE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Average	Average
Upper Klamath Lake	Average	Average
Williamson River	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	440.2	177.2	182.0	206.7
Gerber	94.0	26.1	44.8	39.2
Upper Klamath Lake	584.0	405.3	320.3	360.9

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

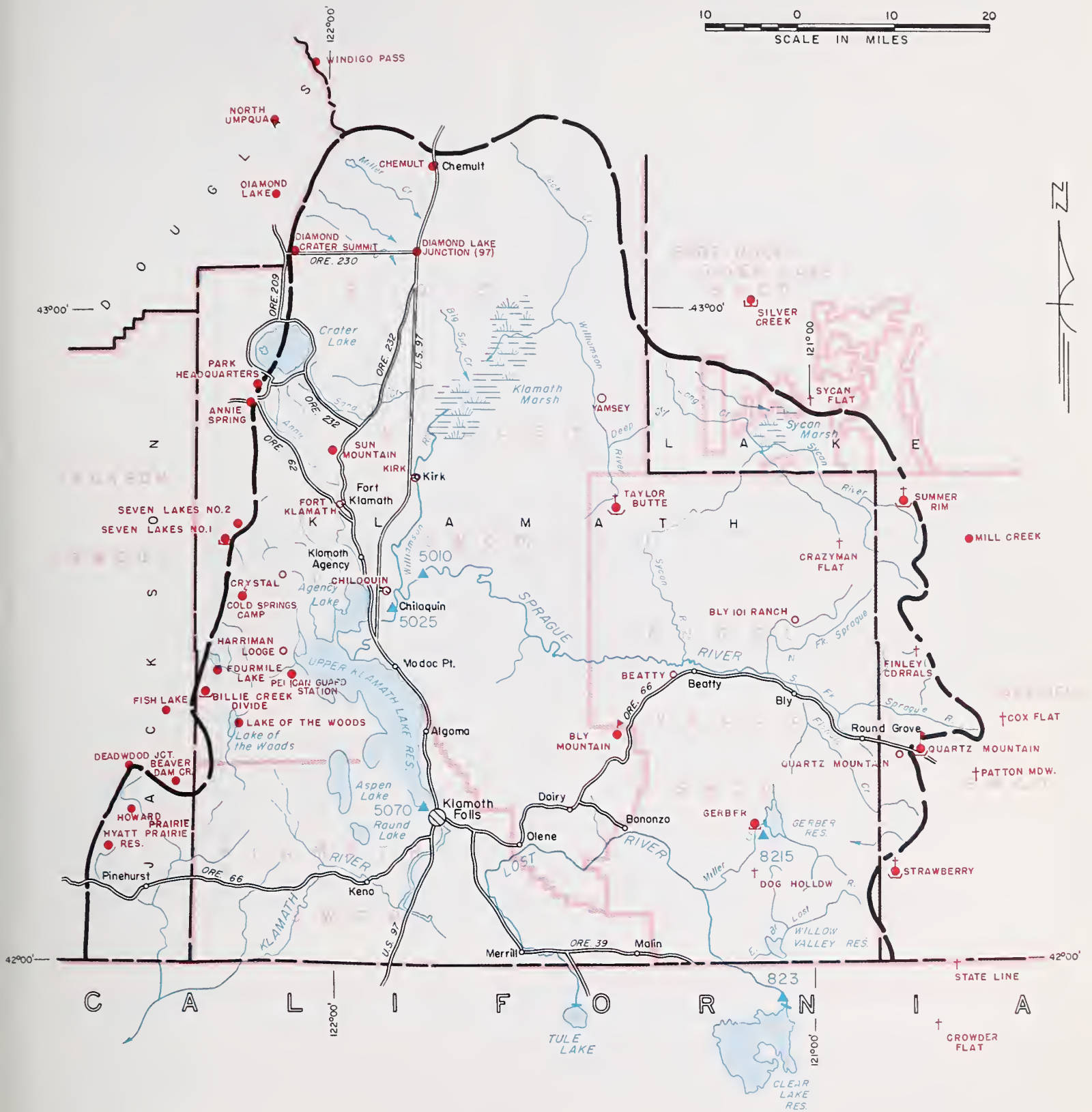
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
923	Clear Lake Reservoir Inflow ^k	163	Feb.-June	87	187
8215	Gerber Reservoir Inflow ^k	81	Feb.-June	43	188
5010	Sprague near Chiloquin	440	Feb.-Sept.	403	109
		350	April-Sept.	296	118
5070	Upper Klamath Lake net Inflow ^k	1080	Feb.-Sept.	954	113
		775	April-Sept.	619	125
5025	Williamson below Sprague River	708	Feb.-Sept.	680	104
		550	April-Sept.	475	116

SOIL MOISTURE

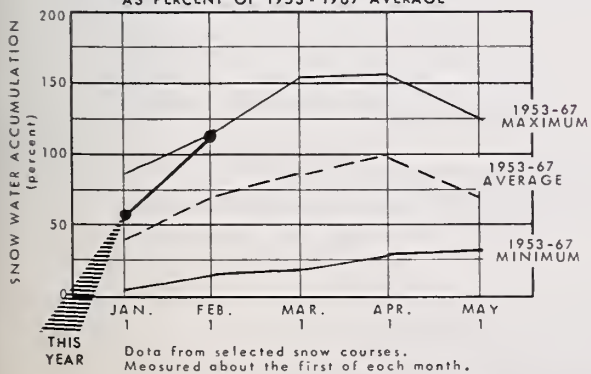
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bly Mountain	5090	42	14.0	1/22	9.9	8.8	9.9

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- + Aerial Snow Depth Gage
- PP&L Snow Station
- ◻ Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry

Klamath Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Annie Spring	6018	1/28	133.	40.5	21.2	27.8
Beatty (PP&L)	4300	1/31	8	1.8	T	0.6 ^m
Billie Creek Divide	5300	1/24	79	24.2	10.0	14.2 ^h
Bly Mountain	5090	1/22	45	10.1	5.0	4.5 ^m
Bly 101 Ranch (PP&L)	4800	1/31	16	4.2	- -	1.7
Chemult	4760	2/3	44	12.5	6.0	8.4
Chiloquin (PP&L)	4187	1/31	23	5.8	0.1	1.7
Cold Springs Camp	6100	1/31	122	35.4	15.4	21.9 ^h
Crazyman Flat ^e	6100	2/3	58	16.2	5.0	6.5 ^m
Crowder Flat ^e (Calif.)	5200	1/28	27	7.5	2.5	3.0 ^m
Crystal (PP&L)	4200	1/30	62	15.8	6.4	7.1
Diamond-Crater Summit	5800	1/27	103	28.5	12.6	22.7 ^h
Diamond Lake Junction (97)	4600	1/27	32	7.8	3.9	4.7 ^h
Dog Hollow ^e	4900	1/28	14	3.9	0.8	1.2 ^m
Finley Corrals ^e	6000	1/28	74	20.7	9.0	10.4 ^m
Fort Klamath (PP&L)	4150	1/29	35	7.6	4.4	3.8
Fourmile Lake	6000	^c			- -	17.0 ^h
Gerber	4850	1/31	20	6.4	3.6	2.3
Harriman (PP&L)	4200	1/31	43	10.8 ^g	1.7	3.6
Hyatt Prairie Reservoir	4900	1/31	53	15.3	6.4	5.9 ^h
Kirk (PP&L)	4533	1/30	51	7.8	6.0	5.8
Lake of the Woods	4960	1/31	53	14.5	6.3	8.4 ^h
Park Headquarters	6450	1/28	153	50.3	25.6	36.5
Pelican Guard Station	4150	1/24	26	7.4	3.6	3.0 ^h
Quartz Mountain	5320	1/30	41	10.8	6.1	5.4
Quartz Mountain (PP&L)	5504	1/30	45	12.0	7.2	5.4
Seven Lakes #1	6800	1/29	160	49.7	21.4	35.5
Seven Lakes #2	6200	1/29	131	38.2	16.7	25.8
State Line ^e (Calif.)	5750	1/28	48	13.4	3.5	6.5 ^m
Strawberry ^e	5760	1/28	45	12.6	6.9	5.4 ^h
Summer Rim ^e	7200	2/3	59	16.5	8.8	9.8 ^m
Sun Mountain	5350	1/22	78	22.7	10.7	16.7 ^h
Sycan Flat ^e	5500	2/3	44	12.3	4.5	5.7 ^m
Taylor Butte	5100	1/30	41	9.0	3.4	4.5 ^h
Yamsey (PP&L)	4600	^b			- -	- -

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers and other water users in Lake County can expect above average water supplies in the spring and summer of 1969 given average conditions for the remainder of the winter and spring months.

SNOW COVER

Water content of the mountain snowpack on local watersheds has increased to 195 percent of the average for February first, compared to 155 percent of average last month and 68 percent of average for last year at this time.

PRECIPITATION

Winter precipitation, November 1 to February 1, has been 170 percent of average, according to the U. S. Weather Bureau.

SOIL MOISTURE

Moisture in the upper watershed soils is 66 percent of capacity compared to only 53 percent last year.

RESERVOIR STORAGE

Substantial amounts of inflow will result from the much above average snowpack. February 1 contents were unavailable because of the heavy snow.

STREAMFLOW

Flow into Drews Reservoir for the March-July period of 1969 is forecast at 85,000 acre feet, which is 185 percent of average.

Forecasted flows for the March-June period of other streams in the area are as follows:

<u>Station</u>	<u>Volume</u>	<u>Percent of 1953-67 Average</u>
Chewaucan River near Paisley	103,000 a. f.	123
Twentymile near Adel	38,000 a. f.	165
Deep Creek above Adel	127,000 a. f.	167
Honey Creek near Plush	30,000 a. f.	171

These forecasts are made on the assumption that near average conditions of precipitation and temperatures will prevail from this date to the end of the forecast period.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD		RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
	SPRING SEASON	LATE SEASON			THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Chewaucan River	Excellent	Average	Cottonwood	8.7	b	0.8	2.1*
Crooked Creek	Excellent	Average	Drews	63.0	b	35.8	34.0
Deep Creek	Excellent	Average	Thompson Valley	19.5	b	b	- -
Dry Creek	Excellent	Average	*Average for years of record (in base period) after reconstruction.				
East Side Goose Lake	Excellent	Average					
Guano Lake	Excellent	Average					
Honey Creek	Excellent	Average					
Lakeview Water Users Assn.	Average	Average					
Rock Creek (Hart Mtn.)	Excellent	Average					
Silver-Buck Creeks	Excellent	Average					
Summer Lake	Excellent	Average					
Thomas Creek	Excellent	Average					
Twentymile Creek	Excellent	Average					
Warner Lakes	Excellent	Average					

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3840	Chewaucan near Paisley	103	March-June	84	123
3715	Deep above Adel	127	March-June	71	167
3385	Drews Reservoir net Inflow	85	March-July	46	185
3785	Honey Creek near Plush	30	March-June	17.5	171
3900	Silver Creek near Silver Lake	33	March-July	21	157
3660	Twentymile near Adel	38	March-June	23	165

SOIL MOISTURE

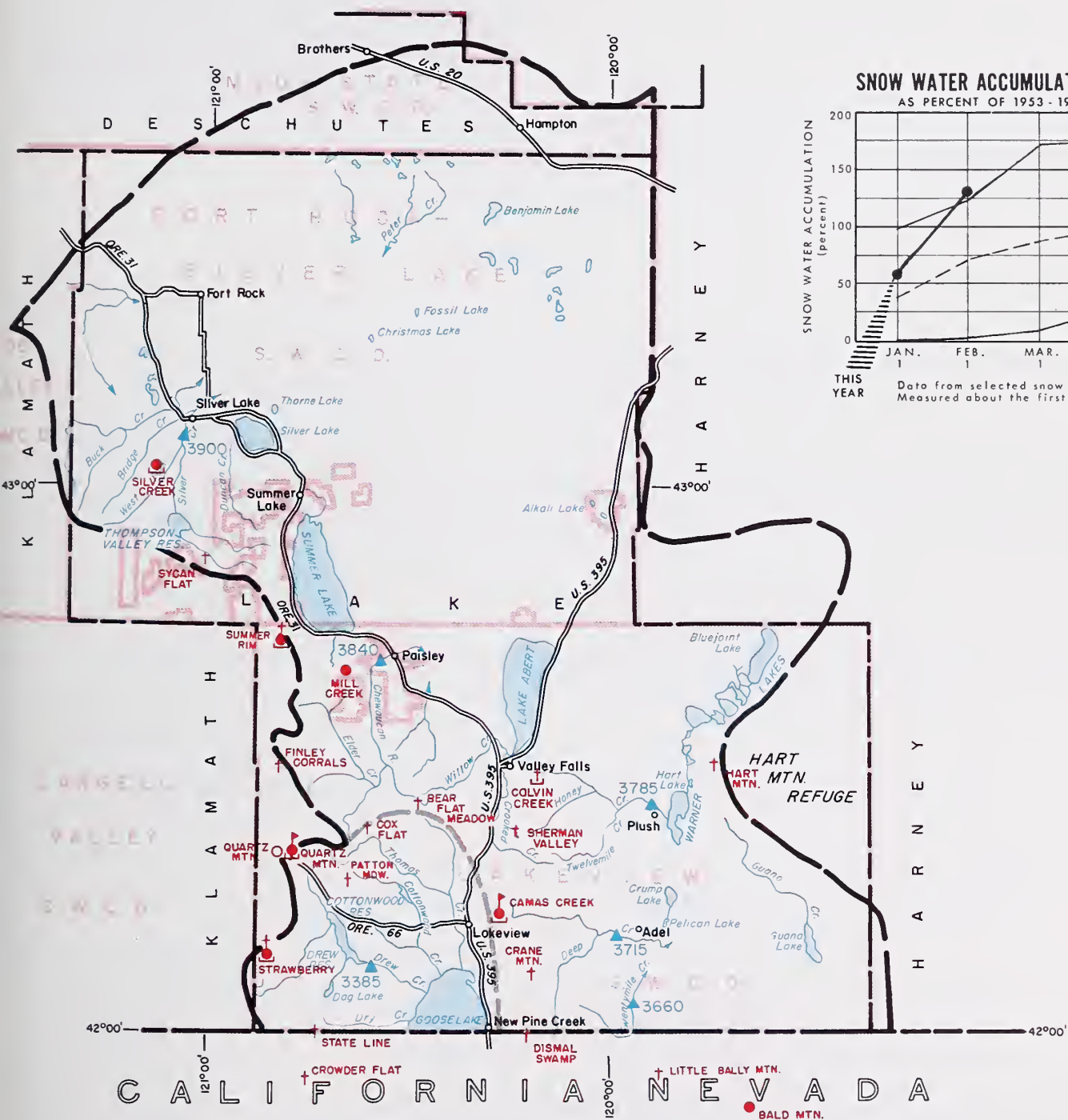
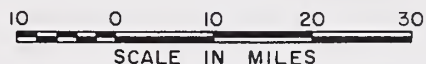
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Camas Creek	5420	42	14.5	1/29	12.1	10.1	12.0
Quartz Mountain	5320	48	15.3	1/30	7.5	5.8	8.9

SNOW

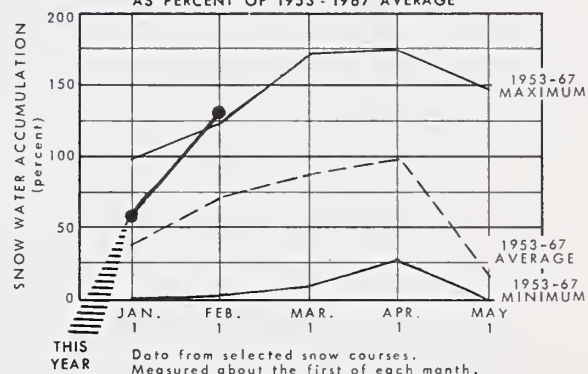
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Adin Mountain (Calif.)	6350	b			9.0	7.5
Bald Mountain (Nev.)	6720	c				
Bear Flat Meadow ^e	5900	1/28	48	13.4	6.0	5.8 ^m
Camas Creek	5720	1/29	52	14.0	7.3	7.3
Cedar Pass (Calif.)	7100	b			10.8	9.5
Colvin Creek ^e	6550	2/3	33	8.9	1.0	- -
Cox Flat ^e	5750	1/28	37	10.3	5.8	5.3 ^m
Crane Mountain ^e	6020	1/28	22	5.9	1.0	2.9 ^m
Crowder Flat ^e (Calif.)	5200	1/28	27	7.5	2.5	3.0 ^m
Dismal Swamp ^e (Calif.)	7000	1/28	60	16.2	5.5	9.1 ^h
Finley Corrals ^e	6000	1/28	74	20.7	9.0	10.4 ^m
Hart Mountain ^e	6350	2/3	9	2.4	0.8	1.0 ^m
Little Bally Mountain ^e (Nev.)	6600	2/3	15	4.1	1.5	1.9 ^h
Mill Creek	6200	b			- -	- -
Patton Meadows ^e	6800	1/28	72	20.1	7.5	10.8 ^m
Quartz Mountain (PP&L)	5504	1/30	45	12.0	7.2	5.4
Quartz Mountain	5320	1/30	41	10.8	6.1	5.4
Sherman Valley ^e	6600	1/28	51	13.8	5.2	6.9 ^m
Silver Creek	4900	1/31	24	5.5	1.5	2.9
State Line ^e (Calif.)	5750	1/28	48	13.4	3.5	6.5 ^m
Strawberry ^e	5760	1/28	45	12.6	6.9	5.4 ^h
Summer Rim ^e	7200	2/3	59	16.5	8.8	9.8 ^m
Sycan Flat ^e	5500	2/3	44	12.3	4.5	5.7 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11
AS PERCENT OF 1953 - 1967 AVERAGE



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- ◡ Soil Moisture Station
- ⌈ Precipitation Gage

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

FEBRUARY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers and other water users in Harney Basin can expect above average water supplies in the spring and summer of 1969.

SNOW COVER

Water content of the mountain snowpack in local watersheds is 154 percent of the February first average compared to 94 percent of average one year ago.

PRECIPITATION

Winter precipitation for November 1 to February 1 has been 160 percent of average, according to the U. S. Weather Bureau records.

STREAMFLOW

Forecasts of expected streamflow for the April-September period of 1969 are as follows:

<u>Station</u>	<u>Volume</u>	Percent of 1953-67 <u>Average</u>
Donner und Blitzen near Frenchglen	73,000 a.f.	133
*Silver near Riley	21,000 a.f.	120
Silvies near Burns	108,000 a.f.	130
**Trout Creek near Denio	15,400 a.f.	200

These forecasts assume that near average conditions of temperature and precipitation will prevail in the next four months.

* April-July
** March-July

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) Feb. 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Average
Cow Creek	Average	Average
Donner und Blitzen River	Average	Average
Mill-Coffeepot Creeks	Average	Average
Rattlesnake Creek	Average	Average
Silver Creek	Average	Average
Silvies River	Average	Average
Soldier-Prather Creek	Average	Average
Trout Creek	Excellent	Average
Whitehorse Creek	Excellent	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	64	March-June	52	123
		73	April-Sept.	55	133
4030	Silver near Riley	21	April-July	17.9	120
3935	Silvies River near Burns	130	March-June	99	131
		108	April-Sept.	83	130
4065	Trout Creek near Denio	15.4	March-July	7.7	200

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Springs	5900	42	16.9	2/3	10.6	7.7	9.7
Fish Creek	7900	48	15.0	c			
Folly Farm	4450	30	12.5	c			
Silvies	6900	48	16.4	c			
Snow Mountain	6300	48	16.7	1/30	14.3	- -	14.3
Starr Ridge	5150	36	10.6	2/4	10.5	7.8	10.4
Stinking Water	4800	48	21.9	1/29	21.4	- -	- -
Willow-Bald	5000	24	6.6	1/29	6.2	3.5	6.4

SNOW

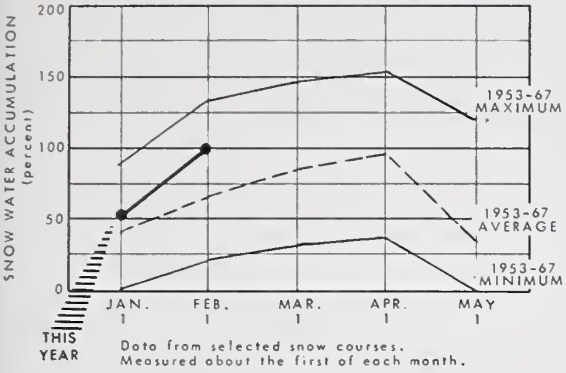
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Blue Mountain Springs	5900	2/3	57	15.0	7.4	10.4
Buck Pasture ^e	5700	2/4	6	1.2	T	1.6 ^m
Buckskin Lake ^e	5200	2/4	14	3.9	0.0	0.8 ^m
Call Meadows ^e	5340	2/4	22	5.7	0.2	2.1 ^m
Crow Camp ^e	5500	2/4	18	4.7	0.0	1.2 ^m
Delintment Lake	5600	1/30	32	7.3	- -	5.1 ^h
Denio Creek ^e	6000	2/4	6	1.7	0.0	0.6 ^h
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	1/29	20	4.5	0.6	2.8
Fish Creek ^e	7900	2/4	72	20.1	4.6	14.4 ^h
Hart Mountain ^e	6350	2/3	9	2.4	0.8	1.0 ^m
Idlewild Camp	5200	1/31	28	5.6	2.6	3.7
Izee Summit	5293	1/30	30	6.3	2.9	5.4
Lake Creek R.S.	5120	2/3	38	8.8	4.4	7.0 ^h
Oregon Canyon ^e	6950	2/4	38	10.6	1.2	3.2 ^h
Rock Spring	5100	1/31	25	4.9	3.8	3.8
Silvies ^e	6900	2/4	38	10.6	1.6	- -
Snow Mountain	6300	1/30	46	10.5	- -	8.6 ^h
Starr Ridge	5150	2/4	25	7.0	2.0	4.1 ^h
Stinking Water	4800	1/29	24	5.8	1.9	2.6 ^h
Trout Creek ^e	7800	2/4	38	10.6	1.0	3.7
"V" Lake ^e	6600	2/4	38	10.6	0.2	2.5 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

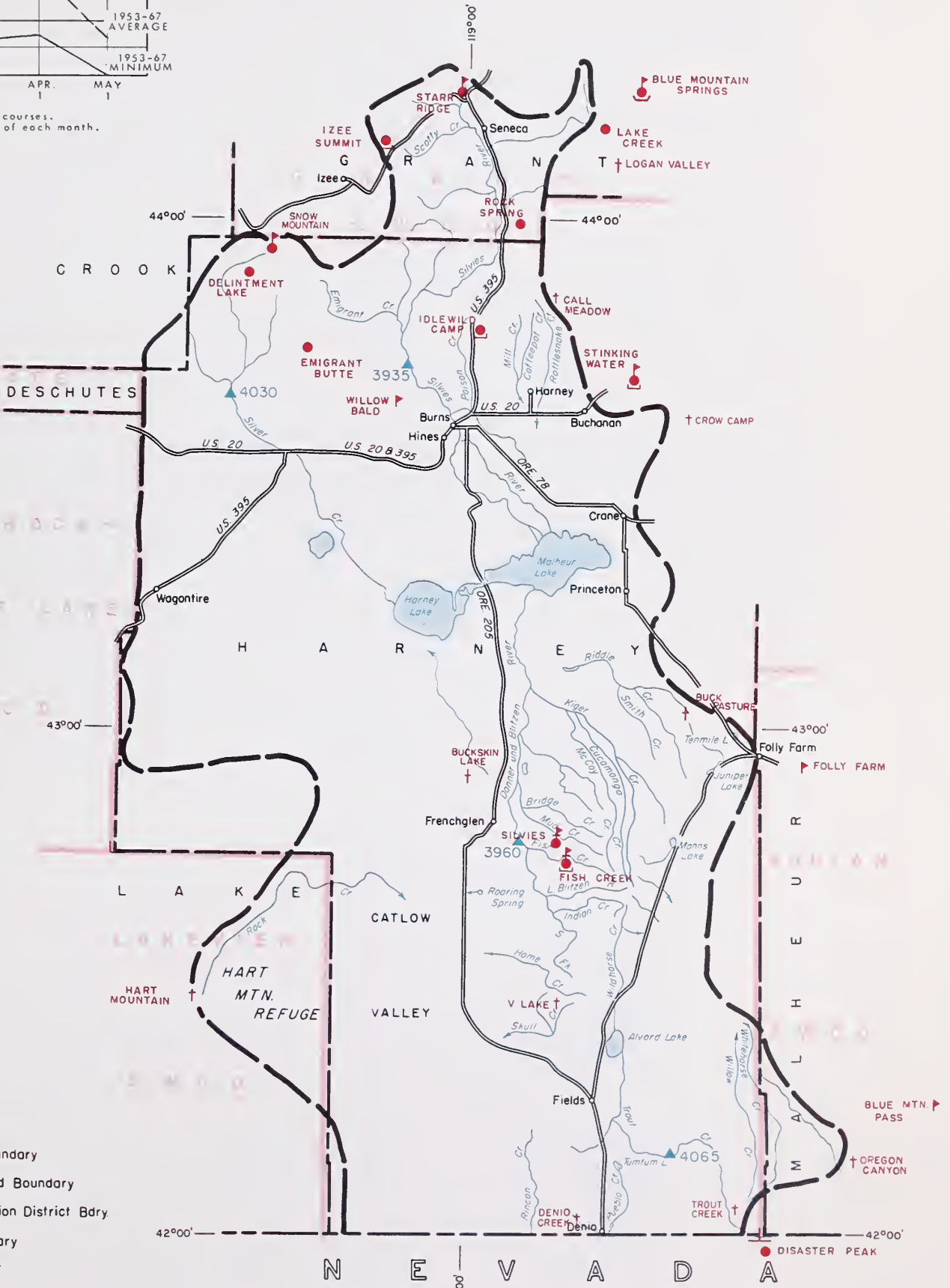
HARNEY BASIN WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 12

AS PERCENT OF 1953-1967 AVERAGE

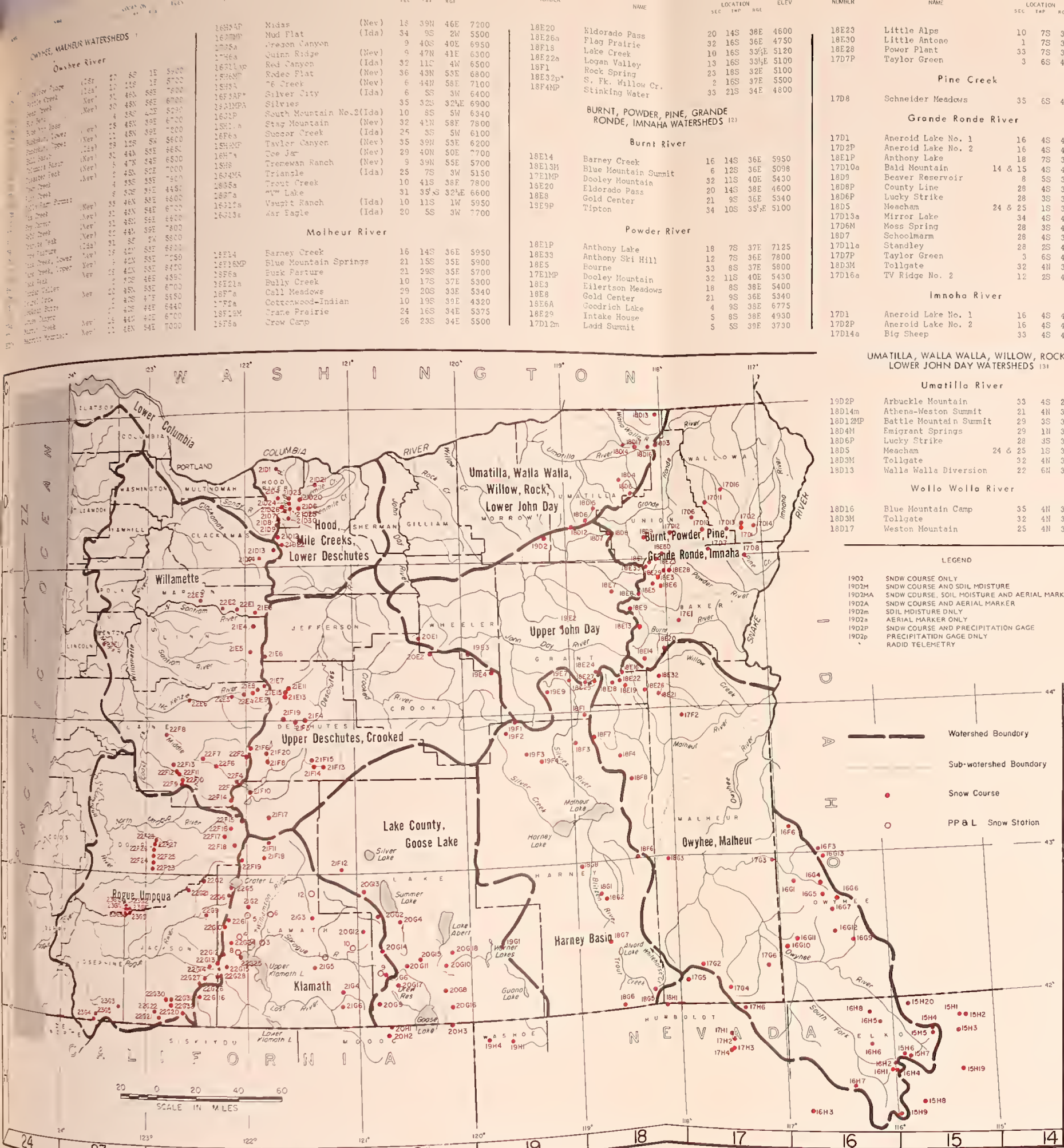


10 0 10 20 30
SCALE IN MILES



LEGEND

-
- The map displays the Klamath River Watershed with various boundaries and monitoring points. The legend identifies the following features:
- Watershed Boundary:** Represented by a thick black line.
 - Sub-watershed Boundary:** Represented by a thin black line.
 - Soil Conservation District Boundary:** Represented by a pink line.
 - County Boundary:** Represented by a dashed black line.
 - Forecast Point:** Represented by a blue triangle.
 - Snow Course:** Represented by a red circle.
 - Aerial Snow Depth Gage:** Represented by a red cross.
 - Soil Moisture Station:** Represented by a red flag.
 - Precipitation Gage:** Represented by a red bracket.



NUMBER	NAME	LOCATION	SEC	TWP	RGE	ELEV
Willow Creek						
19D2P	Arbuckle Mountain	33	4S	29E	5400	
18E1P	Anthony Lake	18	7S	37E	7125	
UPPER JOHN DAY WATERSHEDS (141)						
Upper John Day River						
19D2P	Arbuckle Mountain	33	4S	29E	5400	
18D12MP	Battle Mountain Summit	29	3S	31E	4340	
19E2M	Beech Creek Summit	4	12S	30E	4800	
18E16MP	Blue Mountain Springs	21	15S	35E	5900	
19E3MP	Blue Mountain Summit	6	12S	36E	5090	
18E27a	Derr	14	13S	23E	5670	
18E8	East Fork Canyon	15	15S	32E	5700	
18E24a	Gold Center	21	9S	36E	5340	
19E9P	Indian Cr. Butte	5	15S	33E	6550	
18D6P	Izee Summit	28	16S	29E	5293	
20E1MP	Lucky Strike	28	3S	32E	5050	
20E2	Marks Creek	25	12S	19E	4540	
18E7	Ochocho Meadows	21	13S	20E	5200	
18D7	Oliver Lake	14	9S	33½E	6000	
19F1M	Schoolmarm	28	4S	34E	4775	
19E7M	Snow Mountain	1	13S	26E	6300	
19E7M	Starr Ridge	20	15S	31E	5150	
18E9P	Tipton	34	10S	35½E	5100	
18E25MP	Williams Ranch	20	15S	32E	4500	
UPPER DESCHUTES, CROOKED WATERSHEDS (51)						
Upper Deschutes River						
21E11	Black Pine Spring	14	16S	9E	4600	
21F8	Caldwell Ranch	30	21S	8E	4400	
22F9	Cascade Summit	7	23S	6E	4880	
21F11	Chemult	21	27S	8E	4760	
21F20P	Deer Creek	25	20S	7E	4554	
21F14	Fire Road	36	21S	11E	5050	
21E6	Hog Pass	24	13S	7½E	4755	
21F4	Hungry Flat	30	18S	11E	4400	
21F6*	Irish-Taylor	25	20S	6E	5500	
21F17	Movich	29	25S	9E	4700	
21F10	New Crescent Lake	11	24S	6E	4800	
21F19P	New Dutchman Flat #2	21	18S	9E	6400	
21F13P	Paulina Lake	34	21S	12E	6330	
21F15	Paulina Prairie	28	21S	11E	4285	
21F3	Tangent	28	18S	10E	5400	
21E15	Three Creeks Butte	27	16S	9E	5200	
21E13	Three Creeks Meadows	34	16S	9E	5650	
22F2P	Waldo Lake	15	21S	6E	5500	
22F14*	Willamette Pass	33	24S	5½E	5600	
22F15	Windigo Pass	32	25S	6E	5800	
Crooked River						
19E3MP	Derr	14	13S	23E	5670	
20E1MP	Marks Creek	25	12S	19E	4540	
20E2	Ochocho Meadows	21	13S	20E	5200	
19F1M	Snow Mountain	1	13S	26E	6300	
19E4	Tamarack	8	15S	25E	4800	
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS (61)						
Hood River						
21D6P	Brooks Meadows	2	2S	10E	4300	
21D25M	Cooper Spur	6	2S	10E	3490	
21D1	Greenpoint Reservoir	28	2N	9E	3400	
21D20	Knebal Springs	31	1S	11E	3850	
21D23	Parkdale	5	1S	10E	1770	
21D8*	Phlox Point	7	3S	9E	5400	
21D4	Red Hill	20	1S	9E	4400	
21D9	Still Creek	25	3S	8½E	3670	
21D28	Switchback	28	1S	9E	3255	
21D7P	Tilly Jane	15	2S	9E	6000	
21D21	Ulrich Ranch Junction	28	1S	11E	3350	
21D30	Umbrella Falls	3	3S	9E	5400	
21D24	Upper Valley	20	1S	10E	2530	
Mile Creeks - Mosier Creek						
21D6P	Brooks Meadows	2	2S	10E	4300	
21D20	Knebal Springs	31	1S	11E	3850	
21D21	Ulrich Ranch Junction	28	1S	11E	3350	
Lower Deschutes River						
21D12	Clear Lake	29	4S	9E	3500	
21D22	Clear Lake Experimental	29	4S	9E	3500	
21E6	Hogg Pass	24	13S	7½E	4755	
LOWER COLUMBIA WATERSHEDS (71)						
Sandy River						
21D8*	Phlox Point	7	3S	9E	5400	
21D9	Still Creek	25	3S	8½E	3670	
WILLAMETTE WATERSHEDS (81)						
Clackamas River						
21D3	Clackamas Lake	35	5S	8½E	3400	
21D12	Clear Lake	29	4S	9E	3500	
21D14P*	Peavine Ridge	14 & 15	6S	7E	3500	
21D8*	Phlox Point	7	3S	9E	5400	
21D9	Still Creek	25	3S	8½E	3670	
Klamath River						
22G6	Annie Spring	19	31S	6E	6018	
22G13P	Billie Creek Divide	30	36S	5E	5300	
21G5M	Bly Mountain	15 & 22	37S	11E	5090	
21F11	Chemult	21	27S	8E	4760	
22G24*	Cold Springs Camp	12	35S	5E	6100	
20G12a	Crazyman Flat	9	34S	15E	6100	
20H2a	Crowder Flat (Cal)	30	47N	11E	5200	
22F19	Diamond-Crater Summit	34	28S	6E	5800	
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600	
20G14a	Dog Hollow	1	40S	14E	4500	
20G14a	Finley Corral	11	36S	16E	6000	
Santiam River						
22E1	Detroit (City)	1	10S	5E	1610	
22E2	Detroit Dam	7	10S	5E	1580	
21E6	Hogg Pass	24	13S	7½E	4755	
22E4	Marion Forks	28	11S	7E	2730	
22E3	Mill City	29	9S	3E	826	
21E5	Santiam Junction	14	13S	7E	3990	
21E3	Whitewater Bridge	28	10S	7E	2175	
McKenzie River						
21E8	Dead Horse Grade	13	16S	7E	3800	
22E4	Lost Creek Ranch	24	16S	6E	1956	
21E7	McKenzie	35	18S	7½E	4800	
22E5	McKenzie Bridge	13	16S	5E	1372	
22E6	Vida	28	16S	2E	800	
21E9	White Branch Slide	15	16S	7E	2800	
Middle Fork Willamette River						
22F3	Cascade Summit	7	23S	6E	4880	
22F6	McCreddie Springs	36	21S	4E	2120	
22F8	Meridian Dam	13	19S	1W	750	
22F7	Oakridge	16	21S	3E	1310	
22F5	Railroad Overpass	21	22S	5E	2750	
22F4	Salt Creek Falls	32	22S	5½E	4000	
22F2P	Waldo Lake	15	21S	6E	5500	
22F14*	Willamette Pass	33	24S	5½E	5600	
Coast Fork Willamette River						
22F9	Champion	12	23S	1E	4500	
22F10	Golden Curry Creek	1	23S	1E	3136	
22F13	Laying Creek R. S.	31	21S	1E	1200	
22F12	Lund Park	22	22S	1E	1740	
22F11	Weaver Creek	35	22S	1E	2440	
Mory's River						
23E1	Mary's Peak	21	12S	7W	3620	
ROGUE, UMPQUA WATERSHEDS (91)						
Rogue River						
23G4P	Althouse	17	41S	7W	4530	
22G6	Annie Spring	19	31S	6E	6018	
22G28	Beaver Dam Creek	1	38S	4E	5100	
22G21P	Big Red Mountain	31	40S	1W	6500	
22G13P	Billie Creek Divide	30	36S	5E	5300	
22G30	Caliban	16	40S	1E	6500	
22G27	Deadwood Junction	8	38S	4E	4600	
22F19	Diamond-Crater Summit	34	28S	6E	5800	
22G14P	Fish Lake	3	37S	4E	4865	
22G12	Fourmile Lake	9	36S	5E	6000	
23G3	Grayback Peak	9	40S	5W	6000	
22G26	Howard Prairie	32	38S	4E	4500	
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900	
22G22	Little Red Mountain	25	40S	2W	6500	
22G31	Mt. Ashland Switchback	15	40S	1E	6400	
23G5	Park Headquarters	8	41S	7W	4045	
22G10P	Seven Lakes No. 1	8	31S	6E	6450	
22G11	Seven Lakes No. 2	26	33S	5E	6200	
22G2	Silver Burn	30	30S	4E	3720	
22G20	Siskiyou Summit	17	40S	2E	4630	
22G32	Ski Bowl Road	22	40S	1E	6000	
22G9	South Fork Canal	12	33S	3E	3500	
22G1	Whaleback	3	31S	2E	5140	
Umpqua River						
22F9	Champion	12	23S	1E	4500	
22F18P	Diamond Lake	29	27S	6E	5315	
23G8	King Mountain No. 1	5	33S	4W	4500	
23G9	King Mountain No. 2	4	33S	4W	4000	
23G10	King Mountain No. 3	33	32S	4W	3648	
23G11	King Mountain No. 4	33	32S	4W	3049	
23G12	King Mountain No. 5	29 & 28	32S	4W	2380	
23G13	King Mountain No. 6	20	32S	4W	1820	
22F16	North Umpqua	19	26S	6E	4215	
22F23	Red Butte No. 1	36	27S	2W	4560	
22F24	Red Butte No. 2	30	27S	1W	4000	
22F25	Red Butte No. 3	30	27S	1W	3500	
22F26	Red Butte No. 4	30	27S	1W	3000	
22F27	Red Butte No. 5	20	27S	1W	2500	
22F28	Red Butte No. 6	17	27S	1W	2000	
22F17	Trap Creek	1	27S	4E	3800	
22G1	Whaleback	3	31S	2E	5140	
22F15	Windigo Pass	32	25S	6E	5800	
KLAMATH WATERSHEDS (101)						
Klamath River						
22G6	Annie Spring	19	31S	6E	6018	
22G13P	Billie Creek Divide	30	36S	5E	5300	
21G5M	Bly Mountain	15 & 22	37S	11E	5090	
21F11	Chemult	21	27S	8E	4760	
22G24*	Cold Springs Camp	12	35S	5E	6100	
20G12a	Crazyman Flat	9	34S	15E	6100	
20H2a	Crowder Flat (Cal)	30	47N	11E	5200	
22F19	Diamond-Crater Summit	34	28S	6E	5800	
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600	
20G14a	Dog Hollow	1	40S	14E	4500	
20G14a	Finley Corral	11	36S	16E	6000	
Fourmile Lake						
22G12	Fourmile Lake	9	36S	5E	6000	
21G4P	Gerber	12	39S	13E	4850	
22G26	Howard Prairie	32	38S	4E	4500	
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900	
22G15	Lake of the Woods	11	37S	5E	4960	
22G5	Park Headquarters	8	41S	6E	6450	
22G25	Pelican Guard Station	9	36S	6E	4150	
20G6MP	Quartz Mountain	2	38S	16E	5320	
22G10P	Seven Lakes No. 1	3	34S	5E	6800	
22G11	Seven Lakes No. 2	26	33S	5E	6200	
20H1a	State Line (Cal)	21	48N	11E	5750	
20G9AP	Strawberry	4	40S	16E	5760	
20G2AP	Summer Rim	15	33S	16E	7200	
21G2	Sun Mountain	22	32S	7½E	5350	
20G13a	Sycan Flat	25	31S	14E	5500	
21G3P	Taylor Butte	23	31S	11E	4600	
Pacific Power and Light Company's Snow Stations						
1	Beatty (PP&L)	22	36S	12E	4300	
10	Bly 101 Ranch (PP&L)	22	35S	14E	4800	
3	Chiloquin (PP&L)	34	34S	7E	4187	
4	Crystal (PP&L)	26	34S	6E	4200	
5	Fort Klamath (PP&L)	22	33S	7½E	4150	
8	Harriman Lodge (PP&L)	3	36S	6E	4200	
6	Kirk (PP&L)	1	33S	7E	4533	
9	Quartz Mountain (PP&L)	33	37S	16E	5504	
12	Yamsey (PP&L)	20	31S</			

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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*"The Conservation of Water begins
with the Snow Survey"*